

Thomas Aquinas on Human Nature

Robert Pasnau

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This is a major new study of Thomas Aquinas, the most influential philosopher of the Middle Ages. The book offers a clear and accessible guide to the central project of Aquinas's philosophy: the understanding of human nature. Robert Pasnau sets the philosophy in the context of ancient and modern thought and argues for a series of groundbreaking proposals for understanding some of the most difficult areas of Aquinas's thought: the relationship of soul to body, the workings of sense and intellect, the will and the passions, and personal identity.

Structured around a close reading of the Treatise on Human Nature from the *Summa theologiae* and deeply informed by a wide knowledge of philosophy and its history, this study will offer specialists a series of novel and provocative interpretations, while providing students with a reference commentary on one of Aquinas's core texts.

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Thomas Aquinas on Human Nature

A Philosophical Study of *Summa theologiae*
Ia 75–89

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List of Abbreviations

<i>CT</i>	<i>Compendium theologiae</i> (Leonine vol. 42)
<i>InIC</i>	<i>In epistolam primam ad Corinthios</i>
<i>InDA</i>	<i>Sententia libri De anima</i> (Leonine vol. 45,1)
<i>InDC</i>	<i>In libros De caelo et mundo expositio</i>
<i>InDDN</i>	<i>Super librum Dionysii De divinis nominibus</i>
<i>InDH</i>	<i>Expositio libri Boetii De ebdomadibus</i> (Leonine vol. 50)
<i>InDMR</i>	<i>Sententia libri De memoria et reminiscencia</i> (Leonine vol. 45,2)
<i>InDSS</i>	<i>Sententia libri De sensu et sensato</i> (Leonine vol. 45,2)
<i>InDT</i>	<i>Super Boetium De trinitate</i> (Leonine vol. 50)
<i>InGC</i>	<i>In librum primum De generatione et corruptione expositio</i>
<i>InJoh</i>	<i>Super Evangelium S. Ioannis lectura</i>
<i>InLC</i>	<i>In librum De causis expositio</i>
<i>InMet</i>	<i>In duodecim libros Metaphysicorum expositio</i>
<i>InNE</i>	<i>Sententia libri Ethicorum</i> (Leonine vol. 47)
<i>InPA</i>	<i>Expositio libri Posteriorum</i> (Leonine vol. 1*,2)
<i>InPH</i>	<i>Expositio libri Peryermenias</i> (Leonine vol. 1*,1)
<i>InPh</i>	<i>In octo libros Physicorum expositio</i>
<i>InPs</i>	<i>Postilla super Psalmos</i> (Parma vol. 14)
<i>InRom</i>	<i>In epistolam ad Romanos</i>
<i>QDA</i>	<i>Quaestiones disputatae de anima</i> (Leonine vol. 24,1)
<i>QDIA</i>	<i>Quaestio disputata de immortalitate animae</i>
<i>QDM</i>	<i>Quaestiones disputatae de malo</i> (Leonine vol. 23)
<i>QDP</i>	<i>Quaestiones disputatae de potentia</i>
<i>QDSC</i>	<i>Quaestio disputata de spiritualibus creaturis</i>
<i>QDUVI</i>	<i>Quaestio disputata de unione verbi incarnati</i>
<i>QDV</i>	<i>Quaestiones disputatae de veritate</i> (Leonine vol. 22)
<i>QDVC</i>	<i>Quaestiones disputatae de virtutibus in communi</i>
<i>QQ</i>	<i>Quaestiones quodlibetales</i> (Leonine vol. 25)
<i>SCG</i>	<i>Summa contra gentiles</i>
<i>SENT</i>	<i>In quatuor libros Sententiarum</i>
<i>ST</i>	<i>Summa theologiae</i>
	(1a = first part; 1a2ae = first part of second part; etc.)

References to *ST* 1a typically cite just question and article (e.g., 85.3c, 29.1 ad 4).

I use an abridged version of the title to refer to the following short treatises: *De substantiis separatis* (Leonine vol. 40); *De 43 articulis* (Leonine

LIST OF ABBREVIATIONS

vol. 42); *De unitate intellectus*, *De ente et essentia*, *De principiis naturae*, *De operationibus occultis naturae*, *De mixtione elementorum* (Leonine vol. 43).

In cases where the Leonine reference system might prove inconvenient, I provide within brackets the older Marietti reference.

Theories refers to Pasnau (1997c).

Acknowledgments

At a time when many young scholars are unemployed or badly underemployed, I've been fortunate (in part just plain lucky) to have had two very good jobs, one now at the University of Colorado, and the other at St. Joseph's University, Philadelphia's fine Jesuit college. I drafted this book, in its entirety, over the course of four years at St. Joseph's, and I am grateful to the students, faculty, and administration there for their support and friendship. More recently, CU/Boulder has provided an ideal setting for extensively revising that first draft.

I've been helped by many people in writing this book, particularly by Chris Shields, who patiently read and discussed every chapter with me. Thanks for help with smaller pieces also goes to the late Norman Kretzmann and to Audre Brokes, Christina van Dyke, David Boonin, Michael Gorman, Paul Studtmann, Jeff Hause, Tom Bennigson, Renée Smith, Mark Case, Eleonore Stump, Paul Hoffman, Gyula Klima, Jack Zupko, Gabriela Carone, Richard Cameron, Brian Leftow, Rega Wood, Allen Wood, and the staff at Loom Theological Books. Participants in a fall 2000 graduate seminar at Boulder – particularly Kate Waidler and Theresa Weynand – provided much useful feedback, and the Kayden Manuscript Prize provided financial support. Finally, I was the beneficiary of generous comments from two readers for Cambridge University Press, Richard Cross and Martin Tweedale.

I began preliminary work on this book in 1994, while still in graduate school. As the book has developed, I've been led to pursue many issues that simply would not fit within the confines of this single volume. As a result, most of the articles I've published over the last few years have grown out of the chapters that follow. Though the articles occasionally borrow paragraphs from the book, they are in every case offshoots – detached appendices, if you like – rather than rough drafts. The endnotes provide references to this work where appropriate. I spent a year in 1994–95 translating Aquinas's *Commentary on Aristotle's De anima* (New Haven, 1999), which proved to be the ideal preparatory study for this book. My first book, *Theories of Cognition in the Later Middle Ages* (Cambridge University Press, 1997), discusses related problems of mental representation and intentionality. Here I mostly pass over those issues.

A Note to the Reader

I have tried to write a book that would help the novice, stimulate the non-specialist, and provoke the specialist. To this end, I have sought to avoid technical philosophical jargon (both scholastic and analytic), or else to explain it clearly. Readers puzzled by a term should look to the index for cross-references. I have also tried to write each chapter, and when possible each section within a chapter, in such a way that it could be read independently. Readers interested in a particular topic can turn directly to the relevant sections, using as their guide the table of contents, the outline of the Treatise, and the summaries that precede each chapter.

I have used endnotes rather than footnotes so as not to distract from the main thread of the argument. These notes largely concern the secondary literature on Aquinas and interesting parallels to other philosophers, old and new. I have tried to make each endnote substantive enough to be worth the effort. From time to time I've placed important notes within boxes in the main text, to provide a kind of rest stop for the drowsing reader (or perhaps an entrance point, for the browsing reader).

In the end, this has become a rather large book (though it is much too small for the range of topics I discuss). Unfortunately, Part I is the most difficult and tendentious. But one needn't start there. Readers most interested in perception and knowledge might begin with Chapter 6 and then skip to Chapters 9–11. Readers most interested in metaphysics will want to start with Part I, and then perhaps skip to Chapter 12. In fact, almost any order will do.

Introduction

*Alioquin, si nudis auctoritatibus magister
quaestionem determinet, certificabitur
quidem auditor quod ita est, sed nihil
scientiae vel intellectus acquires, sed
vacuus abscedet.*

QQ 4.9.3c; see p. 16

This book is a close study of Aquinas's best-known philosophical text (§In.1), read in the light of his full body of writings (§In.2). The topic is human nature, which for Aquinas means above all a discussion of the soul and its various capacities (§In.3). My focus is philosophical, and yet the subject is a work of theology, because often it is theology in the Middle Ages that comes closest to our modern philosophical concerns (§In.4). Still, it is crucial to understand the theological context. Aquinas's interest in the philosophical problems surrounding human nature grows out of his broader theological views about the meaning of life (§In.5).

In.1. Overview

In the chapters to come, I have some novel and perhaps surprising things to say about Thomas Aquinas. As I consider how best to ease the reader down this road, the words of Montaigne come to mind: "Aristotle wrote to be understood; if he could not do this, much less will another that is not so good at it" (*Essays*, ch. 21). In fact I doubt whether Aristotle always did write to be understood, but certainly Aquinas did, above all in his reader-friendly *Summa theologiae*. But in the more than 700 years that have passed since Aquinas's death in 1274, our modes of expression have changed a great deal. Surely there is some call for commentary.

Of course, I am not alone in this enterprise. It may be that more has been written about Aquinas than about any other philosopher, and some of it has been insightful. Again, I think of Montaigne:

Who will not say that glosses augment doubts and ignorance, since there's no one book to be found, either human or divine, which the world busies itself about, whereof the difficulties are cleared by interpretation. The hundredth commentator passes it on to the next, still more knotty and perplexed than he found it. When were we ever agreed among ourselves: "this book has enough; there is now no more to be said about it?" (ibid.).

INTRODUCTION

Somehow I am not distressed by this. It seems to me that knots and perplexity lie at the essence of philosophy. A philosophical text without knots is not philosophical at all. At best such a text will have started as philosophy and achieved too much, by treating an issue so thoroughly and decisively that it slips out of the realm of philosophy – growing up, perhaps, to become science.

A knotty philosophical text, then, is an interesting philosophical text, and it is my aim to identify a good many of the knots lying beneath Aquinas's serene prose. To my mind, there is far too much consensus in the secondary literature, a consensus that is symptomatic of a failure to appreciate the depth of his thought. I am constantly amazed at how much of what is written avoids raising the truly hard questions, and consequently leaves the reader feeling that perhaps Aquinas has nothing of much interest to tell us. It is as if those who suppose Aquinas has all of the answers have entered into a kind of unspoken conspiracy with those who suppose he has no interesting answers, with the result that his ideas have been neglected by the wider philosophical community.

An investigation into human nature raises many of the hardest questions in philosophy. I have by no means been able to address all of the issues that Aquinas raises in connection with human nature, but I think no one will feel cheated by the range of topics. The chapters that follow begin with the nature of soul and the mind-body problem (Chapters 1–5), then take up the workings of sense, will, and intellect (Chapters 6–10), and conclude with self-knowledge (Chapter 11) and immortality (Chapter 12). I have found that to understand many of these issues, I need to turn to metaphysics. As a result, much of what is novel in these chapters stands or falls with some controversial claims on topics such as these:

- What is prime matter? (§§1.4 and 1.5, *Excursus*)
- What are substances, and what are substantial forms? (§3.2)
- What is the relationship of form and matter? (*Excursus*)
- What is the role of teleology? (§§In.5, 6.2, 7.1)
- How are substances individuated? (§12.4)

I am sure I haven't done justice to any one of these vast problems, let alone all of them. But I hope that I have been able to bring out at least some of the potential within Aquinas for an adequate solution.

Aquinas's ideas are surrounded on all sides by complex traditions. On one side, he himself was deeply influenced by earlier philosophers, Aristotelian, Platonic, and Augustinian, and he absorbed these traditions through a wide variety of sources. On the other side, Aquinas was at first the subject of fierce controversy and then, after both he and his work were canonized, the subject of a long commentary tradition. I had at one time hoped to situate Aquinas's thought within this context, backward and forward, but the task proved overwhelming. (From time to time, fragments of this effort surface, particularly in the notes.) The one influence I have remained committed to tracking is Aristotle's. Aquinas's philosophy is

Aristotelian in the way his theology is Christian, and much of what follows is unintelligible apart from its background in Aristotle's metaphysics and psychology.

In.2. The scope of the study

This is a study of Aquinas's Treatise on Human Nature, just one small part of the *Summa theologiae*'s first part (*ST* 1a), which itself constitutes only about a fourth of *ST*. The Treatise contains a mere fifteen questions (QQ75–89) out of the 119 that make up 1a. In all, my subject is less than 3 percent of *ST*'s whole. There are obvious reasons for picking this 3 percent: it is here, more than anywhere else in *ST*, that Aquinas confronts perennial questions about the human mind, the relationship between mind and body, the senses, intellect, and the scope of human knowledge. But these are issues that Aquinas takes up in many different places, often times at greater length, and so it is not so obvious why one should pick out the Treatise for special attention.

This question can be sharpened by looking at Aquinas's prologue to *ST* 1a, where he explains in careful detail his motivation for composing the work.

A teacher (*doctor*) of the catholic truth is not only responsible for instructing those who are advanced, but also has the duty to educate those who are just beginning, in keeping with what the Apostle says, in I Corinthians 3, *As unto little ones in Christ, I gave you milk to drink, not meat*. For this reason, our intent in this work is to develop those issues that concern the Christian religion in a way that suits the education of those who are just beginning.

It has seemed to us, however, that those who are new to this teaching are impeded in a variety of ways when it comes to the things that various people have written: partly by the proliferation of unhelpful questions, articles, and arguments; partly, too, because the issues necessary for such students to acquire knowledge are developed not in instructional order, but according to the requirements of a textual commentary, or as the occasion for a disputation allowed; partly, also, because the constant repetitiveness of these works has generated aversion and confusion in the minds of those listening.

We will strive, therefore, to avoid these faults and others of this sort, and we will attempt, trusting in divine aid, to pursue those issues that concern sacred doctrine in a manner concise and lucid – inasmuch as the material allows (1a pr).

These remarks paint a vivid picture of pedagogy in the thirteenth century. Like a distinguished research professor faulting his colleagues for being too wrapped up in their own work to take notice of their students, Aquinas argues that the standard scholarly formats of his day are more confusing than illuminating for the novice. Lectures and treatises were too long, too repetitive, too disorganized – the result being “aversion and confusion.”

Vita

Aquinas is almost always silent on the subject of his personal motives and goals. We do not know, for instance, why he became a Dominican friar, nor why and how his theological and philosophical interests grew during his early years. Even as regards that most public side of him, his lectures and writings, we are largely in the dark about why Aquinas wrote what he did, when he did: Why, for instance, a *Summa contra gentiles*? (It was once widely thought that *SCG* was written as a kind of field guide for Christian missionaries in their intellectual struggles against the infidels. This has been discredited.) Why commentaries on Aristotle? (It was once widely assumed that these were written with the idea of combatting Averroes's influence as a commentator. This too has been discredited.) In light of such uncertainties, the preface to *ST* is particularly unusual and valuable for the insight it gives us into Aquinas's background motivations.

For a good summary of Aquinas's life and work, see Kretzmann and Stump (1998). The best detailed biography is Torrell (1996). Despite Aquinas's relatively explicit remarks, there is still controversy over precisely what role he intended *ST* to play. For two interesting and quite different suggestions, see Boyle (1982) and Jenkins (1997), ch. 3.

Aquinas no doubt meant these charges to apply to himself as much as to others. His first major work (1252–56) was a commentary (in question form) on Peter Lombard's *Sentences*. This work was both enormous (though no more so than *ST*), and also hopeless with respect to “instructional order,” as cursory inspection shows. Although the first book of *SENT* begins promisingly enough, with a discussion of theology's status as a science, Aquinas immediately plunges into a series of questions on use and enjoyment, a central topic in medieval ethics but hardly an appropriate starting point for a course in theology. Hard on the heels of this discussion, he enters into the mystery of the Trinity, the worst imaginable topic to take up with novices.

In giving his Commentary this order, Aquinas was simply following the structure of Lombard's *Sentences*; he was, then, very much writing “in keeping with the requirements of a textual commentary.” Indeed, such a commentary was the standard medieval requirement for a “teacher of the catholic truth.” Thus William Ockham, at the beginning of his own vast commentary on the *Sentences*, sixty years later, must first take up use and enjoyment (but only after a long and interesting prologue on theology and science), then the Trinity, and so forth.

Aquinas considered revising *SENT* in the mid-1260s, but gave up that project in favor of *ST*, which covers much the same ground, but in a style more conducive to novices. In *ST*, use and enjoyment get taken up in their proper context, near the beginning of the 12ae (QQ11,16), in the middle of Aquinas's discussion of human action. The Trinity is discussed in 1a (QQ27-43), but only after a thorough discussion of God's existence and essential nature.

Once scholastic theologians completed their lectures on the *Sentences*, their scholarly activities most often turned toward disputed questions, which might take up any topic – sometimes within certain limits, but often on any topic at all that a member of the audience might suggest. (These latter were known as *quaestiones quodlibetales*.) Aquinas delivered his first Quodlibet (QQ 7) in Advent, 1256, soon after finishing *SENT*. The topics he covered in that debate typified the random nature of such occasions: after three sets of questions on spiritual substances (the angels), the subject turned toward the Eucharist, then the bodies of the damned, then the interpretation of Scripture, and finally the value of manual labor. (He contends that doing philosophy counts as manual labor (QQ 7.7.1c).)

Most of Aquinas's disputed questions were not quodlibetal, and hence were more narrowly focused: he argued sets of questions on, among other things, truth, divine power, evil, and the virtues. The set of disputed questions that is of particular interest to us is his *Quaestiones disputatae de anima* (QDA), which seems to have been delivered the year before he began *ST*. Not surprisingly, there is considerable overlap between the two works. The most striking difference is the relative brevity of *ST*. In *ST* 1a 75.5 (“Is the soul composed of matter and form?”), for instance, there are four objections followed by a brief main reply (the body or *corpus* of the article). QDA 6 asks the identical question, but introduces seventeen objections, and makes a reply that is four times as long. This is characteristic of the difference between Aquinas's disputed questions and *ST*. By a *summa* of theology, Aquinas does not mean the pinnacle of his work but merely a summary.

These considerations lead to some obvious questions. What does a reader gain, in focusing on *ST*, and what does the reader miss? Would one merely be missing “the proliferation of unhelpful questions, articles, and arguments”? Or is *ST* an oversimplification: good for beginners, but inadequate for the serious scholar? Scholars have largely preferred the first answer. James Weisheipl (1974) refers to *ST* as “Thomas's major work, the crown of his genius” (p. 361). John Jenkins (1997) writes that “on any given issue, the *Summa* generally contains the most mature, clear and definitive statement of Aquinas's position”; it “expresses his most fully developed thought” (p. 78). These remarks suggest that *ST* manages to be both concise and definitive, accessible to students and at the same time his most profound masterpiece.

Perhaps. But we should beware of letting educational needs distort history. Descartes's *Meditations*, for example, has been influential out of

all proportion to its originality or quality, largely because of its accessibility to novices. If any of the great scholastic authors had put themselves to the trouble of writing in such a popular style, we would have a very different picture of the transition from ancient to modern thought. As things are, *ST* is about as close as the later medieval period can come to a *Meditations*. But it is a mistake to suppose one can reach a deep understanding of Aquinas solely by a close reading of *ST*. Aquinas's vast literary output (more than eight times the length of Aristotle's surviving work) is not a miracle. He wrote with extraordinary speed: rather than laboring for years over a single work, Aquinas chose to plow forward from treatise to treatise, regularly taking up again issues that he had already considered. At any one time Aquinas might have been composing three or four different works (dictating at once to multiple secretaries, if the stories are to be believed), and he cannot have left himself much time for polishing or mulling over the details of any given work. No one of these treatments can be viewed as decisive; each has to be considered as part of the larger fabric that makes up Aquinas's complete system of thought. Each time Aquinas reconsiders an issue he does so from a slightly different perspective. Generally, though not always, these perspectives are complementary, and so one can reach a deeper understanding of any one work by comparing it with other discussions of similar material.

My approach is to take each of Aquinas's texts as just one more rough draft on the way toward his ideal philosophy. This "rough draft" strategy makes particularly good sense for the Treatise, which in the space of fifteen questions goes over issues to which Aquinas returned repeatedly during his career, often at much greater length. So, to take just one characteristic example, 76.8 asks exactly the same question that gets asked in I *SENT* 8.5.3, *SCG* II.72, *QDA* 10, and *QDSC* 4: "Is the soul whole in each part of the body?" Any serious study of Aquinas should take advantage of his repetitiveness by examining how these multiple drafts make up a whole that goes deeper than any single version.

But then why a study of *ST* in particular? One very practical reason is that a study of *ST* should be useful to many different readers. Because the Treatise is among the more accessible works of later medieval philosophy, it makes a natural point of entry for today's generation of novices. At the same time, because the Treatise was written at the height of Aquinas's powers, and sets out what he regards as his very best arguments, it is the natural focal point for more detailed scholarly work.

The considerations of the last three paragraphs shape the approach of this study. I take the Treatise as my starting point, a guide to what Aquinas sees as the crucial issues regarding human nature. But I do not aim to understand Aquinas merely through a careful reading of the Treatise. That is where the discussion starts, but we will see in every case that the relatively brief remarks he makes there need considerable supplementation from *SCG*, *SENT*, disputed questions, Aristotelian commentaries, and various shorter treatises. I take seriously *ST*'s claim to be a concise guide

to the essential issues, but I do not suppose that the Treatise offers the last, most decisive word on any one topic.

In.3. On human nature

QQ75–89 are often referred to as the Treatise on Man. This is wrong in two ways. First, Latin has one word for man (*vir*) and another for human being (*homo*), and so a *Tractatus de homine* is better described as a Treatise on the Human Being, if for no reason other than sound principles of translation. Second, and more substantively, Aquinas's *Tractatus de homine* extends all the way through Q102. The first part of this larger treatise, QQ75–89, concerns the *nature* of human beings (*de natura hominis*); the second part, QQ90–102, concerns their *production*, with special attention to the creation of Adam and Eve. It is hard to see how anyone could have missed this point, since the prologue to Q75 is quite clear:

Having considered spiritual and also corporeal creatures [QQ50–74], we should now consider human beings, who are composed of a spiritual and corporeal substance. And first we should consider the nature of human beings [QQ75–89], then second their production [QQ90–102].

Accordingly, I refer to QQ75–89 as the Treatise on Human Nature (or, for short, the Treatise).

What does Aquinas mean when he says he will focus on human nature? The short answer is that by 'nature' Aquinas means more or less what we would expect: he means to discuss the essential features of human beings, the things that make us human, or (as Aristotle often puts it) what it is to be a human being. But *natura* has a complex range of meanings, and we will understand the Treatise better if we take a look at how Aquinas understands the term in its various senses. *Natura* was first imposed, Aquinas tells us, to refer to the generation of living things; in this sense it serves as the abstract noun for the verb *nascor* (to be born). By extension, the term came to signify the inner principle of any generation or birth, and then, extended still more, to signify any inner principle of movement or action. Finally, the term is given one further meaning, as the ultimate end of the process of generation, which Aquinas identifies as the essence of the species.

On this analysis, three of the four Aristotelian causes are identified as candidates for the meaning of *natura*. Both the formal and the material cause can be the nature of a thing inasmuch as either of these causes can be considered the inner source of movement or action. The final cause too can be the nature inasmuch as the essence of a thing is the end of the process of generation.

Just as form or matter was called *nature* because it is the principle of generation (and generation gets called *nature* on account of how the term was first imposed), so species and substance get called *nature* because that is the end of generation. For generation has as its end-point the species of the thing being generated, which results from the union of form and matter (*InMet* V.5.822).

INTRODUCTION

So ‘nature’ starts out meaning something like *birth*, and then gets extended to mean, first, the internal principles of birth and of movement in general and, second, the ultimate end of this process.

The Treatise is concerned with human nature in this last sense: its topic is the essence or defining character of human beings. “In general it is the essence of any thing, what its definition signifies, that is called its nature” (29.1 ad 4). Yet this focus on the essence of being human leads back to the prior sense of *natura* as inner principle of action, and so in turn to the question of whether matter or form has the better claim as being the inner principle of a thing’s existence and functioning. Aquinas holds that form, rather than matter, is the inner principle that makes a thing be what it is: “the essence of any given thing is completed through its form” (29.1 ad 4). Indeed, following Aristotle, Aquinas holds that in the case of natural, nonartificial substances, the formal and the final cause are identical. The ultimate end of generation is the primary inner principle of a being, and this is its form. The form of a thing is the reason why such a thing was generated; that is what the process of generation was aimed at. So in the human case, since a human being’s form is the soul, “the end of the generation of a human being is the soul” (*InMet* VIII.4.1737). In this sense, Aquinas says, the formal and final cause of a human being are numerically the same.¹

What about matter? Aquinas holds that the material cause (the human body, for example) has much less of a claim to be part of human nature. It was the characteristic mistake of the pre-Socratics to suppose that all things could be explained in terms of material causes:

Ancient philosophers, unable to transcend their imaginations, . . . said that the only things that exist are bodies, and that what is not a body is nothing (75.1c).

Following Aristotle’s famous diagnosis, then, Aquinas holds that explanations must be given in terms of formal as well as material cause (see *InPh* II.2). This is not a conclusion that the Treatise takes for granted. The very first thing that Aquinas sets out to show, in 75.1, is that the soul is not a body but rather the form of a body (see §1.3). Yet although material causes take a back seat to formal causes, still no definition of human beings would be complete without reference to the bodies from which we are composed.

The nature of a species consists in what its definition signifies. But in the case of natural things the definition signifies not the form alone, but the form and the matter (75.4c).

Human beings are essentially embodied creatures, and moreover essentially have bodies of a certain kind (see §2.1). A complete inquiry into human nature, then, would take as its subject all that is characteristically human, body as well as soul. (For discussion, see *InDA* I.2.144–160; *InPh* II.4.175.)

A theoretical enquiry into human nature will be aimed at the *universal* nature of being human:

IN.3. ON HUMAN NATURE

Sometimes *nature* is called the what-it-is of a thing, which includes all that the completeness of the species requires. For it is in this way that we say that human nature is common to all human beings (*SCG* IV.41.3788).

The Treatise is not concerned with features peculiar to one person or another, but with soul in general, and body in general. To this end Aquinas distinguishes between two kinds of matter, common and signate. Only the former is contained in human nature:

Thus matter is part of the species in natural things – not signate matter, of course, which is the principle of individuation, but common matter. For just as it belongs to the character of this [particular] human being to be composed of *this* soul, *this* flesh, and *these* bones, so it belongs to the character of *human being* to be composed of soul, flesh, and bones (75.4c, continuing the earlier passage).

Etymology

Like many medieval authors, Aquinas is fond of speculative etymology. In claiming that the original meaning of *natura* is *birth* or *generation*, he seems for once to be right. (His source is Aristotle, *Met.* V 4, 1014b16, but see “*natura*” in Lewis and Short 1879.)

Here, as is often the case, the etymology serves a serious purpose (see Jordan 1986, pp. 16–17). Aquinas believes that language is isomorphic with the way we think (see Pasnau 1997a). By looking at how names change their meaning, we can see the way our thoughts have evolved.

Names are imposed by us in keeping with how we understand things, because names are signs for the things we understand. Now sometimes we understand the primary through the secondary, and thus we apply a name to something in a primary way, when in actual fact the name is suited to it only secondarily. So it is in this case. For because the forms and powers of things are cognized through their actions, generation or birth took the primary sense of the name *natura*, whereas form took the most remote sense (*InMet* V.5.824).

From a logical point of view, *natura* ought to mean the inner principle or form of generation. (Hence Aristotle remarks that “in the primary and strict sense,” *phusis* refers to a thing’s inner principle of movement (*Met.* V 4, 1015a13).) But human understanding starts with what is most visible. So *natura* was first used to refer to the action of generation, and only later applied to the inner principle. We will see that this is a key principle of Aquinas’s methodology: in understanding the soul, one works one’s way in from the external action to the internal capacity that explains the action, and eventually to the nature of soul itself. We have no direct access to the soul, not even to our own soul (§§5.5, 11.2).

This study has little to say about universals (see §10.1). But it is helpful to keep in mind that the subject of the Treatise is the human being, focused not on features peculiar to any one individual, but on the features that all fully functioning human beings must possess.²

These remarks on *natura* confirm that our subject is human nature in what is now the primary sense of that phrase: nature as essence or defining account. We can now understand more clearly how this part of *ST* is structured. Aquinas first lays out God's aim in producing the human species (QQ75–89), then he explains how in fact God did produce the human species (QQ90–102). The second set of questions rests on the first: by providing an account of human nature, Aquinas specifies the final cause of God's creative act. QQ90–102 then complete the discussion of human beings by analyzing the one Aristotelian cause left outstanding: the efficient cause. Here Aquinas addresses the question of where human beings come from. Once he has answered this question, he takes himself to have completed a general treatment of our species.

In.4. A philosophical study

ST is a work of theology. This has two important consequences. First, and most apparently, large parts of the work are concerned with issues that presuppose elements of Christian doctrine. The general topic of 3a, for instance, is Christ. Second, Aquinas permits himself in *ST* to rely on premises that are not accessible to natural reason. Thus the second part of Aquinas's general treatment of human beings (QQ90–102) presupposes in many places the Genesis account of human creation. Although Aquinas is very much concerned with showing that this account is coherent, no attempt is made to demonstrate its truth.

In between and within the more theological discussions there are a great many places where Aquinas engages in analysis that is clearly within the bounds of what we now call philosophy. The Treatise is in this regard perhaps the richest of all such sections of *ST*. The most superficial examination indicates that the topics are philosophical: mind and body, free will, knowledge, intellect, perception (see the list of questions below). A more detailed examination shows that Aquinas's arguments are themselves philosophical, generally presupposing no theological claims whatsoever. Occasionally, Aquinas invokes the existence of a God that created the world according to a rational plan (see §§6.2 and 7.1). But even such nonsectarian theological premises are rare in the Treatise, and never crucial to the argument. So while the overall plan of *ST* is theological, significant portions of the work readily fall within the modern discipline of philosophy.

There should be no objection, then, to a philosophical study of *ST*, especially the Treatise. But there still might seem to be something at least puzzling in the choice of a theological work as the subject for a philosophical study on human nature. If philosophy is what is wanted, why not focus on one of Aquinas's more philosophical works, such as *SCG* or, even more so,

his Commentary on Aristotle's *De anima*? For that matter, why focus on a theologian at all? There were many philosophers active during Aquinas's time (Siger of Brabant, Boethius of Dacia, and others even more obscure) who explicitly sought to contain their arguments within the bounds of natural reason.³

Immediate answers to these questions suggest themselves. The focus is *ST* because that provides the most clear and succinct account of Aquinas's views (§In.2). The focus is Aquinas, because Aquinas was more talented than his contemporaries who taught philosophy. Still, one might feel puzzled. For, putting to one side the excellence of Aquinas and the "concise and lucid" manner of *ST*, it turns out to be generally true (allowing for a few exceptions) that the history of medieval philosophy is the history of medieval theology, minus the theological stuff. Why should theology and philosophy have been so closely tied? Again, an answer may suggest itself. Theology was held in more prestige than philosophy: one advanced to theology only after mastering philosophy. Naturally, the most talented and ambitious minds gravitated to that field. So, since theology as then defined contained philosophical elements, it is natural for historians of medieval philosophy to spend time mining those elements. This is the sort of explanation Anthony Kenny (1993) suggests:

... of course since the greatest medieval philosophers were theologians first and philosophers second, it is to their theological treatises rather than to their commentaries on *De anima* that one turns for their insights into philosophy of mind (p. 20).

This is a non sequitur. Kenny himself notes here that theologians often wrote philosophical works, such as *De anima* commentaries. So why shouldn't philosophers today study those commentaries above all else? Are we to suppose that these theologians didn't put their best efforts into their philosophical works? Did they save themselves for their theology?

Kenny's suggestion simply articulates the conventional view among historians. Yet it is inadequate: it leaves obscure the connection between philosophy and theology, and implies that it is a matter of mere chance that the history of medieval philosophy is largely found within medieval theology. Did it really just so happen that the best philosophers decided to become theologians? Again, there is the prestige of theology in the medieval university – but what if medicine had been the more prestigious field of study? What if the best philosophers had become medical doctors? Would the history of medieval philosophy then be drawn from medical treatises (leaving out, of course, the medical stuff)?

It is surely no accident that the best medieval philosophers became theologians, and that most of medieval philosophy is found within medieval theology. My suggestion is that philosophy today actually has more in common with medieval theology (that is, theology as then practiced) than it does with medieval philosophy (that is, the part of the arts curriculum that was referred to as philosophy in the medieval university).

In other words, it seems to me that medieval theology, not medieval philosophy, is the closest medieval precursor to modern philosophy. Such a claim needs qualification in two ways. First, much of medieval theology is outside of modern philosophy (think of *ST* 3a, devoted to Christology). Second, certain areas of modern philosophy, most notably logic and the philosophy of language, were more often practiced as parts of medieval philosophy, not medieval theology. But the core subjects of philosophy today – ethics, mind, knowledge, metaphysics – were treated in the Middle Ages as central aspects of theology.

One can readily see as much by examining, first, the list of questions that make up the Treatise.

- Q75. The soul in its own right.
- Q76. The soul's union with the body.
- Q77. The soul's capacities in general.
- Q78. The soul's preintellective capacities.
- Q79. The soul's intellective capacities.
- Q80. Appetite in general.
- Q81. Sensual appetite.
- Q82. Will.
- Q83. Free decision.
- Q84. The means through which intellect cognizes corporeal things.
- Q85. How and in what order intellect cognizes corporeal things.
- Q86. What intellect cognizes in corporeal things.
- Q87. How intellect cognizes itself.
- Q88. How the human soul cognizes things that are above it.
- Q89. The soul's cognition when separated from its body.

These are precisely the kinds of issues we would expect to see addressed in a philosophical treatise. (Only the last two questions are exceptions; they presuppose the existence of angels and God, and the temporary separation of soul from body.) Many of these issues might also be taken up by a philosopher working within the medieval arts faculty. But discussions within the arts faculty would also have included a great deal of material that we would now regard as scientific, and of primary interest to historians of science. Such tendencies are apparent even in Aquinas's own Commentary on Aristotle's *De anima*. Although that work does contain valuable philosophical discussions of issues taken up in the Treatise, it contains many excursus that by our lights are not philosophical at all, such as these:

- Why some things remain alive when cut apart (I.14)
- Does imagination have a determinate organ? (II.5)
- The nature of light (II.14)
- The nature of translucent media (II.14)
- The necessity of light for seeing (II.14)
- Why some things are visible in the dark (II.15)
- Why distance impedes vision (II.15)

IN.4. A PHILOSOPHICAL STUDY

Why mental fitness corresponds to touch, not to sight (II.19)

Why smells are not named after tangible qualities (II.19)

How smell is spread to such a remote area (II.20)

Why taste is distinguished from touch (II.21)

Whether touch is one sense or many (II.22)

How air and water are media for touch (II.23)

There is philosophy (as we now think of it) to be gleaned from such discussions, but only if we can put to one side the sometimes peculiar, sometimes embarrassing, scientific speculation. Indeed, the situation is quite analogous to medieval theology, where historians of philosophy often have to sort through purely theological material to uncover important philosophical discussions.

Naturally, Aquinas and his contemporaries did not see it this way. For them the issues taken up in the Treatise would not have appeared untheological; questions about soul, will, intellect, and knowledge were vital parts of theology. Similarly, the above list of topics from *InDA* would have seemed paradigmatically philosophical; it would not have occurred to the medievals that these issues were somehow less philosophical than questions about mind and knowledge. The medieval philosophical curriculum was in large part determined by the Aristotelian corpus, and so philosophy as defined by the medievals no more matches with modern philosophy than does Aristotle's wide-ranging corpus. In 1255 the Arts Faculty at Paris included on their reading list the following Aristotelian works (Dod 1982, p. 73): *The Organon* (logical treatises), *Nicomachean Ethics*, *Physics*, *Metaphysics*, *Parts of Animals*, *On the Heavens*, *Meteorology*, *On the Soul*, *On Generation and Corruption*, *Sense and Sensibilia*, *On Sleep*, *On Memory*, and *On Death*. There is a great deal of philosophy here (as we now think of it), but there are also a great many other things.

Earlier I remarked, paradoxically, that the history of medieval philosophy is the history of medieval theology, minus the theological stuff. The air of paradox disappears once we recognize that 'theology' is being used in two senses: our subject matter is medieval theology, as it was *then* conceived, minus the stuff that we would *now* characterize as theology. What's left (very roughly) is what we now characterize as philosophy. Pushed too far, this claim becomes absurd. Of course there is much of interest to philosophers (now) in philosophy (then). Of course there is much in theology (then) that looks utterly unphilosophical (now). So a more prudent scholar might conclude merely that neither theology (then) nor philosophy (then) corresponds very closely to philosophy (now).⁴ But I want to insist that there is a more interesting conclusion to be reached: that there is something about theology (then) that makes it in many respects the natural precursor to philosophy (now). Consider this telling passage from the prologue to the Treatise:

It is the theologian's role to consider the nature of human beings with reference to the soul, not with reference to the body – except in light of the relationship that

the body has to the soul. And so our first consideration will be turned toward the soul (75pr).

Both theologians and philosophers of the medieval period took human nature as their central subject matter: both studied the soul, the relationship of the soul to body, the capacities of the soul, and so forth. But theologians focused on the soul itself, Aquinas here tells us, whereas philosophers devoted their attention to body as well. A full treatment of human nature would consider both soul and body (§In.3), but scholarship, even in the Middle Ages, tended toward specialization. A medieval philosophical analysis of perception, for instance, would be concerned less with abstract analysis and more with physical mechanisms: the nature of light, the relationship of light to color, the way in which light and color make their way into the eye, the contribution of the various parts of the eye and the brain. The theologian, in contrast, would tend to invoke such physical details only inasmuch as they explained the conceptual issues. For the theologian the central project was to characterize in an abstract way the various

Philosophy and science

Medieval theology, like modern philosophy, tends toward the abstract and conceptual. The medieval theologian investigates human nature in abstraction from the human body, putting aside concrete physiological inquiry in favor of conceptual refinements. Hence historians of philosophy study medieval theology. But is that a good thing? Aristotle's *De anima* is sometimes praised precisely because it is *not* a work in philosophy of mind, but rather in what Kathleen Wilkes (1992) calls "theoretical scientific psychology." It is a strength of Aristotle's approach, Wilkes writes, that it takes a unified approach to all the faculties of soul, from nutrition to higher-level thought, and treats soul as a phenomenon shared by all living things, not just human beings. Moreover, Wilkes praises Aristotle precisely because his theory of soul is not driven from the top down. The philosophy of mind makes the mistake of letting theoretical claims take precedence over inquiry into the underlying physiological mechanisms.

Ironically, medieval theology might therefore be condemned for being too philosophical in the modern sense. Theology (then) would share with philosophy of mind (now) the faults of being overly abstract and too little in touch with empirical data. This raises the possibility of a further irony. In trying to understand how philosophy changed its shape and course from Aristotle to today, might it be scholastic *theology*, of all things, that played a pivotal role in transforming *philosophy* from a highly empirical field of study, continuous with science, to an abstract and sometimes isolated enterprise?

sensory capacities, their functions, and their relationship to soul's other capacities. Physiological details are relevant, as Aquinas puts it above, only "in light of the relationship that the body has to the soul."⁵

It might seem that this account of the relationship between theology and philosophy runs roughshod over how Aquinas himself depicts the two fields. He in fact distinguishes between two sorts of theology, philosophical theology and sacred theology (*sacra doctrina*).⁶ In the very first question of *ST*, he sets out the difference in a way that seems to fly in the face of the argument I have been making. Philosophy, he writes, is "investigated through reason," whereas theology "is grasped through revelation" (1.1c). Theology – that is, sacred theology – takes its principles "immediately from God, through revelation," using other sciences "as inferior and ancillary" (1.5c). If we were to take these claims at face value then it would be hard to see how medieval theology could be of very much interest to philosophical historians, let alone of primary interest. Medieval theology would be almost entirely dependent on the premises of revealed dogma, with philosophical arguments coming in only as a kind of auxiliary tool.⁷ Such an approach would be deeply unphilosophical, in the modern sense, and might even justify Bertrand Russell's notorious charge that "there is little of the true philosophic spirit in Aquinas" (Russell 1945, p. 463).

Yet if this seems to be what Aquinas is saying, his actual practice shows that he must mean something rather different. In fact the sort of account just described badly distorts the character of medieval theology, as it was practiced not just by Aquinas (and Scotus and Ockham), but by theologians throughout the later medieval period. In *ST*, for instance, Aquinas does at times presuppose religious doctrines (as in his account of the first production of human beings (QQ90–102)). But he is constantly concerned with limiting those presuppositions as much as possible. Indeed, immediately after giving the above characterization of theology, Aquinas proceeds to give a series of five philosophical arguments for God's existence (2.3). This would be entirely inappropriate if theology really did take its premises from revealed truth, using philosophy as a mere ancillary tool. The Bible is full of evidence that God exists; why not use that as evidence, rather than the far more doubtful paths proposed by the Five Ways?

Aquinas suggests an answer to this question when he takes up the question of whether theology employs arguments (1.8). One might suppose that it does not, since the data of revealed doctrines very often speak for themselves. (Does God exist? Yes, it says so right here. Does he have foreknowledge? Yes, it says so here.) Aquinas naturally holds that theology does use arguments, and he offers two reasons why. The first is to expand the bounds of theology beyond what is immediately apparent through revelation. The second is to argue against those who would reject some of the basic tenets of the faith. Aquinas recognizes that if an opponent is willing to reject *all* the tenets of the faith then no argument is possible. The most

one could do at that point would be refute the opponent's arguments for the contrary position, leaving the two sides at a standoff. But the typical theological adversary, in Aquinas's time, was one who would accept at least some of the tenets of the faith, and in such cases "we argue through one article against those who would deny another" (1.8c). In such dialectical circumstances one theological strategy recommends itself above all others: one should rest one's arguments on as few revealed premises as possible, taking the faith for granted where one absolutely must, but using premises accessible to reason wherever possible. Such a method makes possible the study of doctrines "necessary to human beings for salvation" (1.1c), and at the same time seeks to make those doctrines as accessible as possible to people who might not accept all the evidence of authority and revelation.

In one of his later quodlibets (from 1271), Aquinas offers a further reason for why theology should spend most of its time on rational arguments rather than appeals to authority.

The disputation of a teacher, in the schools, has the purpose not of eliminating error but of instructing the listeners so that they may be led to understand the truth that the teacher puts forward. And here one must rely on arguments (*rationibus*) that investigate the basis for the truth, and that make it be known *how* what is said is true. Otherwise, if the teacher determines the question based on bare authorities, the listener will be made certain that the thing is so, but will acquire no knowledge or understanding and will go away empty (*QQ* 4.9.3c).

This announces the central motivation for Aquinas's work. Almost everything he wrote was intended for students, not for heretics or infidels, and that is of course true above all for *ST*. The goal of his teaching is not just the right answer, but a deeper understanding of why and how what is said to be true can be true. Merely having the right answer would count for nothing – it does not count even as a form of "knowledge or understanding"⁸ – and the student would go away empty. Aquinas's theology, then, is thoroughly philosophical in its methods. Never is something accepted on faith that might be proved through reason. Revealed doctrine is the foundation of his theology, but in practice it provides at most the guidelines for his work. The real heart of Aquinas's theological project corresponds quite closely with what we consider the project of philosophy.

In.5. The larger context

Although Aquinas's approach is philosophical, his focus is significantly different from our own. This is obvious when *ST* is viewed as a whole, but it is apparent even within the Treatise alone, in its very organization. In the prologue to *Q75*, Aquinas sketches the structure of the fifteen questions to follow.

IN.5. THE LARGER CONTEXT

... our first consideration will be turned toward the soul. And because, as Dionysius says, three things are found in spiritual substances – essence, power, and operation – we will first consider features of the soul’s essence, then second features of its power or capacities, and then third features of its operation.

The Treatise is divided into three sections. The first group of questions (QQ75–76) concerns “features of the soul’s essence,” under which heading Aquinas includes questions regarding the soul in its own right and questions regarding the union of soul and body. The second group of questions (QQ77–83) concerns the soul’s capacities: nutritive, sensory, locomotive, appetitive, and intellective. This list comes from the *De anima* (414a31–32; see 78.1sc), but unlike Aristotle, Aquinas gives by far the bulk of his attention to appetite and intellect. The third group of questions (QQ84–89) concerns the soul’s operations – although in fact the only sorts of operations that get taken up here are those associated with intellect. (Discussion of the appetitive operations is postponed until 1a2ae.)

Aquinas’s focus therefore becomes narrower as the Treatise proceeds. He moves from soul in general (including nonhuman souls), to the various capacities of the soul (paying special attention to intellect and will), and finally to operations associated with intellect alone. Why this increasingly narrow perspective, in what is supposedly a general treatise on human nature? At the outset of his discussion of the soul’s various capacities (78pr), he makes the following remark:

A theologian, in his investigations, has to be concerned with making a special inquiry only into the intellective and appetitive capacities; it is here that the virtues are found.

Evidently the words that follow the semicolon explain those that come before it. Only intellect and the appetites are of special interest to the theologian, because only these capacities are subject to the virtues. (There is no such thing as having virtuous senses, or virtuous capacities for movement and nutrition.) Why this focus on virtue? We regard ethics as merely one kind of issue that arises regarding human nature. Aquinas seems to regard it as the only issue that is important in its own right for a theological investigation of human nature. And when we look ahead to *ST* 2a we see that vast sections of that work are devoted entirely to these topics. From our perspective, this single-minded interest in ethical questions looks rather distorted. Is there a good reason for this focus? Is Aquinas simply manifesting the kind of obsession with sin and virtue that we tend to expect from religious thinkers?

This reference to virtue goes unexplained in the Treatise, but the remark comes into focus when we step back from this particular section of *ST*. The broader plan of the work reveals that Aquinas’s focus has its own philosophical justification. What looks peculiar and narrow-minded turns out to reflect the broader philosophical framework of Aquinas’s thinking about human beings.

Here is the plan of *ST*:

Part One (1a)

Introduction: Sacred Doctrine (Q1)

I. God

- A. God's essence (QQ2–26)
- B. The divine persons (QQ27–43)
- C. The procession of creatures from God
 - 1. The production of creatures (QQ44–46)
 - 2. The distinction among creatures (QQ47–102)
 - 3. The conservation and governance of creatures (QQ103–119)

Part Two (2a)

II. Human Beings

- A. The ultimate end of human life (1a2ae QQ1–5)
- B. Actions through which a human being can reach this end
 - 1. Human actions in general (1a2ae QQ6–114)
 - 2. Human actions in particular (2a2ae QQ1–189)

Part Three (3a)

III. Christ

- A. Christ Himself (QQ1–59)
- B. The sacraments (Q60–)

(Aquinas ceased working on *ST* at the end of 3a Q90. To complete the work his early followers put together the so-called *Supplement*, pasting together material from *SENT*.)

C. Immortal life

Notice, first, that the Treatise falls under the section of *ST* devoted to God, not under the section devoted to human beings. The reason for this is that Aquinas takes the study of God's creative activities to be an important aspect of studying God. Hence more than half of 1a is concerned with the created world, in particular, angels (QQ50–64), the purely physical world (QQ65–74), and human beings (QQ75–102). In part, then, the Treatise is just a piece of Aquinas's larger project to understand God. At the same time, the Treatise establishes the foundations for the enormous second part of *ST*, which takes human beings as its sole subject. These earlier questions are not considered anew in *ST* 2a (except for the discussions of will and freedom (QQ82–83), which gets expanded and reconsidered in 1a2ae QQ6–17). So the Treatise bears much of the weight for the 300-some questions that follow.

Why should *ST* 2a have been devoted entirely to human beings? In the prologue to 1a2ae Aquinas situates this part of the work in an explicitly theological context:

As Damascene says, human beings are said to be made in God's image insofar as 'image' signifies *intellectual*, and *free in one's decisions*, and *capable on one's own*. So now that something has been said about the exemplar, God, and about the things that proceeded from the divine power in keeping with His will, it remains for us to consider His image, human beings, insofar as they too are the source of their actions – as they have free decision and power over their actions (1a2ae pr).

Apparently, *ST* 2a focuses on human beings because we provide an image of God. But this cannot be the whole story, if only because it leaves unex-

plained the focus on human virtue. If Aquinas's only aim were to understand God's nature, there would be no justification for 2a's massive treatment of human action, a discussion so large it needed to be split up into two parts (1a2ae and 2a2ae).

In part, Aquinas's motivation seems to be pragmatic, in that a detailed analysis of human beings would benefit us more than a similar analysis of, say, angels. This, at any rate, is what is suggested by his explanation for the longer second part of *ST* 2a, concerned with human actions in particular:

Imago Dei

The discussion of human beings in 1a QQ75–102 is part of a larger project to understand God via creation. The theologian looks to the created world to understand God in just the sense that the art historian looks to the Sistine Chapel to understand Michelangelo. But if this is the project, then Aquinas would seem to have no special reason to focus on human beings. All of creation provides a kind of image of God, and some parts of creation – specifically, the angels – provide a better image of God (see the Epilogue).

In fact, the distribution of questions in *ST* 1a reflects Aquinas's attempt to give a balanced treatment of the different parts of creation. Human beings are the subject of about twice as many questions as the angels, but of course we are in a better position to describe our own species. (If anything should seem surprising, it is that Aquinas could say as much as he did about where angels are located (QQ51–53), how they think (QQ54–58), etc. See **Doctor Angelicus**, p. 359.) The purely physical world (including nonhuman animals and the heavens) gets only ten questions, rather few for such a large topic. But here Aquinas is brief because the physical world is less important as a manifestation of God's creative power. Angels, as purely incorporeal creatures (50.1), are the loftiest members of the created world, and therefore play a major part in Aquinas's efforts to understand God's creative purpose. Human beings are part spiritual and part physical (“... human beings, who are composed of a spiritual *and* corporeal substance” (75pr)), which gives us a theoretically perplexing kind of dual status – we are meta-physical amphibians, to borrow Eleonore Stump's apt phrase (Stump 1995, p. 514). This unique dual status makes us especially interesting in many ways, and provides some justification for paying special attention to our own species in a general account of God's creative activities.

INTRODUCTION

After a general consideration of virtues, vices, and other things pertaining to moral questions, it is necessary to give special consideration to each one in particular. For this is more useful than universal moral lessons, given that actions involve particulars (2a2ae pr).

Here pragmatic considerations seem to have supplanted the theoretical. Why such an extended discussion of human beings? Because that's what will be useful *to us*. This line of thought raises the question of whether the Treatise might be governed by similar considerations. Why focus on intellect and the appetites? Because that's where the virtues come into play. Why focus on virtue? Because that's what is important for us. So when Aquinas appeals to the theologian's interest in virtue as an explanation for the Treatise's selective focus (78pr), this can be understood as a reflection of the theologian's interest in studying something that will be of real value to human beings.

But again, this is only part of the story. There is a further theoretical rationale that unites Aquinas's speculative interests with his practical inclinations. The Treatise is a foundational work, devoted to giving a general account of human nature – which means, as we have seen (§In.3), an account of the essential features of human beings. It is not simply pragmatic reasons that lead Aquinas to focus on the capacities of soul that are subject to the virtues. His focus is on these capacities because they best reveal the essence of human beings – what it is to be a human being. *ST* 2a provides an extended lesson in morality not just because this is essential to human well-being, but also because these matters are essential to being human. This point is established right from the start of 1a2ae, when Aquinas takes up the question of a human being's ultimate end:

Here the first consideration to be taken up concerns the ultimate end (*fine*) of human life, and next the means through which a human being can attain or stray from this end. For the distinctive features of those things that are ordered to an end have to be drawn from that end (1a2ae 1pr).

The first question to ask regarding human beings is the question of final cause: What is their ultimate end? Aquinas takes it for granted that this ultimate end is happiness (1a2ae 1pr); he goes on to argue that happiness can consist only in a vision of the divine essence (1a2ae 3.8). With this ultimate end in mind, Aquinas can work backward toward human nature. First he determines what one has to do to achieve this final end: paraphrasing Aristotle (*Nic. Ethics* I 9, 1099b16), he writes that “happiness is the reward of virtuous activities” (1a2ae 5.7c). Then he determines the bases within ourselves for carrying out such activities (our cognitive and appetitive dispositions and capacities) as well as the external forces that aid us (law and grace).

ST therefore builds an account of human beings from the ground up. It begins in 1a with the essence of human beings (QQ75–76), works out the capacities (QQ77–83) and operations (QQ84–89), and then throughout 2a develops in careful detail the most essential features. But Aquinas can begin

at the ground level only because he has the whole plan in mind. He sees the end at which human beings are aimed, and only with that in mind can he proceed to lay out the fundamentals of human nature.

With this larger picture in mind, we can understand another way in which Aquinas takes himself to be arguing theologically rather than philosophically. Both theologians and philosophers consider the created world. The difference is that

the philosopher considers what applies to creatures in virtue of their own nature, such as fire's being carried upward, whereas one who has faith [that is, the theologian] considers with respect to creatures only what applies to them in virtue of their being related to God: that they are created by God, for instance, that they are subject to God, and so on (*SCG* II.4.872).

On its face this seems to undermine my claim that medieval theology provides the closest parallel to modern philosophy (§In.4). But the foregoing discussion helps to put this remark in a different light. The philosopher, to Aquinas's way of thinking, must approach creatures from the ground up, grappling with the messy physical details of why fire rises, how plants nourish themselves, how light travels through air, and on and on. The theologian, in contrast, considers human beings from the top down, in light of their ultimate end or final cause. Because of this perspective, it is the theologian and not the philosopher who is in a position to understand human nature.

These remarks suggest that the governing strategy of *ST*, and even Aquinas's conception of himself as a theologian, rest on his conception of final causality. This is an issue I return to in later chapters (§§6.2 and 7.1), but it deserves brief notice here. One of his more telling discussions of this subject comes in his short treatise, *De principiis naturae*:

Hence the end is the cause of efficient causality, because it makes the efficient cause be the efficient cause. Likewise, it makes the matter be the matter, and the form be the form. For matter does not receive its form except through the end, and the form does not perfect its matter except through the end. Hence it is said that the end is the cause of causes, because, for all the causes, it is the cause of causality (*De principiis* 4.29–36 [356]).⁹

The final cause is “the cause of causality.” We might, more precisely, say that the final cause fixes or determines each of the other causes. How precisely does this work? Let us consider formal causes. He tells us here that “the form does not perfect its matter except through the end.” Ordinarily, Aquinas describes form as what actualizes matter (see §1.3), but here he stresses that form perfects (or completes) matter. So we can pick out the form of any composite object by identifying that which perfects the object. But how can we know what the perfection of any given thing involves? This is where the final cause comes into play. We cannot settle questions about the form of an object unless we know what that object's perfect (complete) state consists in. When the statue is finished, we see its form. When

we understand the purpose of human life, we see what the essential features of a human being are. In fact, the final cause specifies and gives shape to the formal cause in much the way that the formal cause specifies and gives shape to the material cause: “The end is related to things ordered to the end just as form is related to matter” (1a2ae 4.4c).

Final causes can seem irrelevant when one supposes that there are other ways to determine the essential features of things. One might, for instance, suggest that human nature can be specified by working out the capacities that make humans different from other creatures. But if this procedure were effective then Aquinas could have devoted the Treatise to our locomotive capacity, analyzing the details of biped locomotion. Obviously this would not capture even part of human nature: “the end of the human soul is not moving the body, but intellectual cognition, wherein one’s happiness lies” (*De unitate* 5.308–10 [261]). One might then suppose, rethinking the first suggestion, that human nature can be specified by working out the most *significant* distinctive capacities of human beings. Aquinas agrees. But he sees no way of giving any content to the notion of *significant* without turning to the final cause. We can’t know what the most significant human capacities are unless we know what the ultimate end of human life is.

In this way, Aquinas’s views about the purpose of human life (the *meaning* of life, as we might loosely say) determine the structure and focus of *ST*. His initial, foundational treatment of human nature, the Treatise that is the subject of this study, takes shape in anticipation of his account of the virtues in 2a. Intellect and the appetites are the focus; the soul’s other powers are of interest only inasmuch as they pave the way for understanding intellect and the appetites. Aquinas’s focus is theological, as he conceives of that, but it is for this very reason also philosophical, as we conceive of that. His view that final causality gives shape to human nature provides both a rationale and a sample of why theology for him is continuous with philosophy for us.

Part I

Essential features (QQ75–76)

I

Body and soul

A study of human nature involves, first and foremost, a study of the human soul. The fact that we have a soul is not even a point of controversy, given the way Aquinas defines his terms. What is controversial is the nature of soul. The first and perhaps hardest article of the Treatise asks whether the soul is a body. Aquinas answers in the negative, but this does not rule out the soul's being something material, in our modern sense (§1.1). Aquinas is concerned with refuting the ancient natural philosophers, who thought that all things were bodies (§1.2). In opposition to their reductive account, Aquinas insists on the explanatory priority of actuality (§1.3). But his dispute with the ancients in fact rests on a deep metaphysical disagreement about the nature of matter, a disagreement that points toward the reductive nature of Aquinas's own account (§1.4).

1.1. What is a human being?

Aristotle remarks in *Metaphysics* VII 17 that the question *What is a human being?* is inherently obscure because it doesn't give us any help in breaking down the problem.

We lose sight of what is being asked most of all in those cases where things are not predicated of one another – e.g., when it is asked *What is a human being?* – because we are speaking unconditionally, without separating out that these are this (1041a32–b2).

Aquinas, in his Commentary, explains:

The reason for our puzzlement in such cases is that some one thing is introduced unconditionally, like *human being*, and the question does not introduce the things to which being human applies, such as the parts, or even something that is the underlying subject (*suppositum*) of the human being (*InMet* VII.17.1662).

What is needed, then, is that we give the question some structure. What, exactly, are we asking about when we ask, *What is a human being?* What are the relevant component parts? What is the underlying subject? The very simplicity of the question, as it stands, impedes our progress. Without some analysis of the subject matter we will find it difficult to provide any satisfactory answer.

It is easy to agree with Aristotle that the question *What is a human being?* is fundamentally obscure. From our perspective the reason for this obscurity lies in large part in uncertainty over what sort of answer might

be wanted. If we could determine the kind of question that is being asked then it seems that an answer might well be within reach. If, for instance, the question is a biological one then perhaps the Human Genome Project will provide the right sort of answer. If the question is psychological, or evolutionary, or historical, then different sorts of answers suggest themselves. It seems that we cannot begin to answer the question, however, until we have some general sense about the sort of answer that is wanted.

In addressing the topic of human nature, Aquinas is asking this very question, *What is a human being?* (see §In.3). He makes it clear that the *sort* of question he is asking is a theological one, and as a result he supposes that an answer must be given in terms of the human soul, focusing on the human body only as it relates to soul (see §In.4). So “our first consideration will be turned toward soul” (75pr). Indeed, the entire Treatise takes the soul as its explicit topic: first, the soul’s essential features (QQ75–76); then, its capacities (QQ77–83); then, its operations (QQ84–89). Already, then, Aquinas has given some content to the initially obscure question *What is a human being?* He will consider the question answered if he can give a general account of the human soul; he will not be interested in the physical characteristics of the human body, save insofar as those characteristics contribute to our understanding of soul.

In the prologue to the Treatise it looks as if Aquinas is simply going to presuppose the soul as his subject matter. If this were his approach then we might well feel as if the project is on shaky ground from the very beginning. To many modern readers it is not at all obvious that human beings even have such a thing as a soul; one might be inclined to agree with David Hume, for instance, who in his own *Treatise of Human Nature* – published in 1739 – speaks of soul as a “fiction,” as “something unknown and mysterious” (I.iv.6). But in 75.1c it becomes clear that Aquinas’s strategy is more credible than it might initially seem. Here, at the very start of his reply, he does give us a rationale for postulating a soul in human beings, and indeed in all living things:

In order to investigate the soul’s nature one must hold from the start that the soul is said to be the first principle of life in the things that are alive around us. For we say that ensouled (*animata*) things are living things, whereas non-ensouled (*inanimatas*) things are those that lack life.

These considerations are meant merely as the starting point of the discussion; even the ancient naturalists are supposed to accept that the soul is the first principle of life (they go wrong when they suppose that the soul is something corporeal). Aquinas thinks that this starting point is uncontroversial – something that any materialist, even the most archly empirical, should accept. For he is simply stipulating here that by ‘soul’ he will mean *first principle of life*. Take the various living things that are, as he puts it, “around us”; let ‘soul’ stand for whatever it is that gives those things life.

Anima

How did it happen that the Latin *anima* came into English as ‘soul’? Most philosophical Latin terms were absorbed straight into English. (A few examples: *materia*, *forma*, *actus*, *potentia*, *motus*, *operatio*, *sensus*, *intellectus*, *imaginatio*, *memoria*.) English has quite a few derivatives from *anima*, such as *animate* (both verb and adjective), *animated*, and even *animal*. But *anima* itself never made it as a noun. The reason seems to be that the word ‘soul,’ Germanic in origin, was on hand from the earliest period of the English language, and was viewed as an acceptable translation for *anima*. It seems likely, however, that our thinking about the soul would be dramatically different, and closer to Aristotle’s, if we hadn’t lost the etymological connection (present in both Latin and Greek) between soul and life. (See **Qwyckening**, p. 112.)

As for why we should give the word ‘soul’ (*anima*) a meaning of this sort, Aquinas appeals to some linguistic data pertaining to the Latin term: things that are alive are said to be animate, whereas things that are inanimate are said to be nonliving. It will be the project of the rest of the Treatise to determine what this *anima* is. At the moment we haven’t even specified whether the soul is some single principle that we all share, or something individual in each one of us – and, if the latter, whether we can make any interesting generalizations from one living being’s soul to another’s. For present purposes Aquinas simply wants agreement on defining the soul as that which, at the most basic level (we are speaking of the *first* principle), gives things life.

With this definition in hand Aquinas proceeds to the article’s primary topic. It is noteworthy that the question Aquinas raises is not one of the more technical, Aristotelian questions he might ask: Is the soul material? Is it a form? Is it a potentiality? Is it an actuality? Instead, he chooses the more concrete question – *Is the soul a body?* – and derives answers to these other questions as he proceeds through QQ75–77. These other questions that he might have asked are not just more technical, in that they presuppose Aristotle’s conceptual framework, but also more controversial. This is particularly so for the question of whether the soul is material. For although to our ears there might seem little difference between asking whether something is a body and asking whether it is material, to Aquinas’s way of thinking these are significantly different questions. To address the question of whether the soul is material, in whole or in part, requires a developed theory of prime matter, an elusive topic on which there was little consensus in Aquinas’s time. Indeed, as we see below in §1.4, Aquinas views mistakes about the nature of matter as underlying the worst sorts of confusions about soul, and therefore about human nature. Aquinas wants

to set these mistakes straight, but without overwhelming the reader with confusing details; he aims here, as always in *ST*, for “a manner concise and lucid – inasmuch as the material allows” (1a pr; see §In.2).

Initially, then, Aquinas wants to duck the issue of whether the soul is at all material: this gets dealt with further on, particularly in 75.5. The question he raises, instead, is whether the soul is a body. This is, in some ways, a less problematic issue, because there was little disagreement over what a body (*corpus*) is, or what it is to be corporeal. Indeed, Aquinas thinks these terms are so clear that they need no explanation at all in 75.1. (We have seen that, in contrast, the notion of the soul *did* need some initial clarification.) To see precisely what ‘body’ means here, we can look at scattered remarks from earlier in *ST*. Bodies, he says, are those substances “in which one finds three dimensions” (18.2c); “a body is what has three dimensions” (3.1 obj. 1). Elsewhere, a body is “a complete magnitude” (7.3c), by which he means extended in three directions (unlike a point, line, or plane). Aquinas treats this characterization of body as utterly commonplace and unobjectionable.

Our topic, then, is taking shape nicely. From the initially puzzling question of *What is a human being?* we are “separating out” the issues just as Aristotle recommends, formulating a new question of the suggested form: *Is this a this? Is the soul a body?* What’s more, the *theses* that make up our question are each well-defined in noncontroversial ways: even Humeans should tolerate the sort of thing Aquinas calls a soul, and the notion of body seems entirely uncontroversial. Further, the problem seems to be posed in terms that are readily observable – there is nothing objectionably metaphysical and abstruse here. We know, at least roughly, what it is to be alive, because we see living beings all around us. Three-dimensional bodies are similarly manifest in our everyday experiences; there is nothing mysterious there. Our question, then, is whether the first principle of life is something that has three dimensions.

Now one might balk at the notion of a *first principle*, thinking that this is where the trouble starts. But in speaking of a *principle* all that Aquinas is looking for is the cause of life, or the internal source from which life springs. (This principle must be *internal*. If Aquinas were looking for the genuinely ultimate source of life then it would turn out that the soul is God.) So one should object to Aquinas’s search for principles only if one objects to the idea of looking for causes. But anyone who would resist at this point is simply not engaged in the same enterprise as Aquinas. He views it as axiomatic that one understands the world by understanding the causes of things: “In order for something to be known one must grasp the causes; for to know is to grasp the cause” (*InMet* VIII.4.1739).¹

It is less clear what Aquinas means by a ‘first principle,’ and he offers surprisingly little guidance in this regard. (This is especially surprising since, as Cajetan rightly points out in his influential sixteenth-century commentary on *ST*, the main argument of 75.1 derives “its whole force”

from that phrase (75.1.IV).) As this study advances, we will see various ways in which the soul can be viewed as the *first* source, cause, or principle of life. It is first in terms of being that which is primarily responsible for the *existence* of a living being (§3.3), and it is also first in terms of what it contributes to the *purpose* of a living being (§6.2). Here we are looking for that which is primarily responsible for life, and Aquinas tells us that “life is displayed above all by two functions: cognition and movement” (75.1c). So to speak of soul as the first principle of life is to say that it is primarily responsible for cognition and movement. As for why the soul is primary, that will have to emerge in the course of this chapter.

Even if Aquinas’s question now seems clear enough, it may nevertheless appear that he has set himself an impossible task, especially for the brief space of this initial article. For, given how Aquinas understands ‘corporeal,’ it may look as if he has committed himself to establishing the existence of some sort of nonextended spiritual power within us, a Cartesian ghost in the machine, an incorporeal homunculus. His position looks even worse once one notices that Aquinas wants this account to hold for *all* living beings: not just humans, nor even just animals, but all the way down to the lowest forms of life. How will we be persuaded that there is something incorporeal responsible even for the life of a plant?

In fact, Aquinas’s goal here is rather different – although no less ambitious, as we will see. First, he is not at all concerned at this point with establishing what this first principle of life does. So there is no reason to fear that we are going to be offered a homunculus account – an account on which some inner faculty is postulated to carry out all the activities that the organism as a whole seemed to carry out. (Obviously such an account explains nothing, but simply raises all the same questions at a more obscure level.) The nature of soul’s powers will become clear as the Treatise emerges, but that is not the concern at present. Second, Aquinas is not arguing that soul is some sort of nonextended substance of the Cartesian sort. Such an entity would indeed be mysterious, and a treatise devoted to its discovery and analysis would be of limited interest. But this is not the way Aquinas thinks of the soul, and he thinks that the air of mystery that surrounds our notion of soul will be dissolved once we recognize the sort of thing we should be looking for. His argument is that to identify soul with body is to commit what amounts to a category mistake. Such corporeal theories look in the wrong place for the first principle of life: they look among bodies, when they should be looking for causal principles of a fundamentally different kind. What soul is, in fact, is the *actuality* of a living body, and to be an actuality is to be incorporeal. But this is not the sort of incorporeal stuff that might dance on the head of a pin. Aquinas is arguing that corporeal theories of soul have misconceived the way an ultimate explanation of life must be given, and consequently have misconceived the nature of soul.

Aquinas’s account is particularly ambitious because he is challenging not just a certain theory of soul, but an entire scientific/philosophical program.

We are given a hint of this in the last few sentences of 75.1c, when Aquinas states his final conclusion:

Therefore the soul, which is the first principle of life, is not a body, but the actuality of a body. And this is so in just the way that heat, which is the principle of heating, is not a body, but the actuality of a body.

With this seemingly casual, off-the-cuff comparison, Aquinas notes that the kind of argument just used to derive soul's incorporeality might equally well be used to derive an incorporeal theory of heat. Just as soul is not a body, so too heat is not a body. Both are actualities (though we will see that they are very different kinds of actualities). The reader who might otherwise have missed the point is here forcibly shown how Aquinas is arguing not just for a particular account of soul but for a general metaphysical theory, one that will extend over all natural phenomena, living and nonliving.

The point is easily missed. For although Aquinas had, early in the reply, introduced the view of the ancient philosophers who held that all things are corporeal, he had not made it clear that he would be issuing such a fundamental challenge to their position. Aquinas says he will employ one of the "many ways of showing that this view is false." But one would naturally suppose his argument to be directed at the ancient position only as regards the soul. It is a surprise to discover, at the end of the reply, that his argument can readily be generalized as a critique of the entire ancient position. If this is Aquinas's aim, then we need to take a step back ourselves, and look at precisely what this ancient view was (§1.2). Then we need to see how Aquinas's argument in 75.1c runs (§1.3). After that, finally, we need to consider whether this argument really can work as a general critique of the ancient position (§§1.4 and 1.5).

1.2. The ancient naturalists

The explicit target of 75.1c is those ancients that held all things to be corporeal.² It is tempting, for us, to refer to these ancient philosophers as materialists. Yet that description can be misleading. It can be misleading, first, because there are vast differences between what we mean by matter and what Aquinas means by matter (see §1.4). Second, and more fundamentally, the label 'materialist' misdescribes the nature of the disagreement between Aquinas and the ancients. Aquinas thinks that these figures went wrong not just because they disbelieved in spiritual entities like God, angels, and the human soul, but – more basically – because they had the wrong metaphysics, even with respect to the natural world that was their focus.

To get straight on these matters we need to look closely at how Aquinas characterizes the ancients' views.³

Now life is displayed above all by two functions: cognition and movement. But the ancient philosophers, unable to transcend their imaginations, claimed that the prin-

Antiqui

Aquinas's information on the pre-Socratics comes largely from Aristotle, from whom he learned about Democritus and Leucippus, Anaxagoras, Empedocles, Thales, Heraclitus, Diogenes, Hippo, the Pythagoreans, and still others. Although Aquinas was aware of some important differences between these figures, he regularly treats them *en masse*.

There were others, more in error, who claimed that the soul is a body. Although their views were distinct and various, it is enough here to disprove them generally (*SCG* II.65.1426; see also *InDA* I.3–13, *De substantiis* 1.1–65 [43–44]).

Aquinas routinely uses the term *antiqui* to pick out all and only the pre-Socratics, even if from his temporal perspective these figures were not significantly more ancient than Plato or Aristotle. (What difference does a century or so make when one is looking back some seventeen centuries – from circa 1267 CE to the fourth and fifth centuries BCE?).

Might the label *antiqui* be explained by Aquinas's having taken these ancients to be considerably earlier than Plato? Not likely. Aquinas is simply following Aristotle's own usage: Aristotle himself sometimes (*Met.* I 5, 986b8, *GC* I 1, 314a6, etc.) refers to the pre-Socratics as the ancients (*hoi palaioi*). Moreover, sometimes Aquinas includes Plato among the ancients (*InDA* I.5.25–45). And in the prologue to *De substantiis separatis*, Aquinas suggests that a consideration of ancient views extends through Plato and Aristotle. Often, to distinguish the pre-Socratics, Aquinas speaks of the “ancient naturalists” (e.g., 75.1 ad 2). These men were “the first of those who philosophized about the natures of things” (*De substantiis* 1.2–3 [43]; see *InMet* I.4.74).

ciple behind these functions is a body. They said that the only things that exist are bodies, and that what is not a body is nothing. And, in keeping with this doctrine, they said that the soul is a body (75.1c).

Here and elsewhere Aquinas is careful about how he presents the ancient view. The ancients in question did not hold that all things are material, but that all things are corporeal (see 75.1 ad 1, *InMet* I.4.78). Aquinas does hold that the ancients erred by postulating only a material cause (see *InMet* VIII.4.1737); it is in that sense, most properly, that we might refer to the ancients as materialists. But his standard characterization of the ancient view is the more straightforward claim that they believed “the only things that exist are bodies.” And, when the ancients are characterized in this way,

it is not at all obvious that their view is an unattractive one. For one way of describing the faith to which the modern materialist subscribes is to say that the only sort of stuff that is out there is material stuff. There is nothing in nature that is nonphysical, incorporeal, or spiritual. If this is a sound translation into modern terms of the ancient views, then most philosophers today will find themselves in sympathy.

Aquinas takes the ancients to be wedded to a more specific and less plausible kind of materialism. He believes they are committed to a very specific metaphysical picture, which we can begin to understand by looking at a slightly different way in which he often characterizes the ancients' view:

The first of those who philosophized about the natures of things held that only bodies exist. They claimed that the first principles of things are certain corporeal elements, either one or many (*De substantiis* 1.1–5 [43]; see 75.3c, *InMet* 1.9.145, *InDA* 1.5.29).

The first sentence here repeats the earlier characterization, but the second sentence makes a more specific claim. One might naturally suppose that this second claim is a straightforward consequence of the first: if only bodies (*corpora*) exist, then *a fortiori* the first principles of things will be corporeal. But the second claim is stronger. There are in fact many philosophers who would consider themselves materialists and yet embrace only the first of these two claims. A latter-day Platonist might suppose that everything that exists is corporeal, and yet believe in abstract (and therefore incorporeal) properties. One might similarly believe in space-time, or in numbers or sets, and yet still insist that everything that actually exists is corporeal. Perhaps there is an irresolvable tension in such claims. But it is at least tempting to suppose that only bodies exist, and at the same time to hold that a metaphysical analysis of bodies reveals principles that are not themselves bodily.

Aquinas identifies the weak point in ancient naturalism as its assumption that even the principles of things must be bodies. He describes all the ancient naturalists as having agreed on this point, and as quarreling over just how many such corporeal principles should be posited. Some thought that one corporeal element could account for the entire natural world. (Thales, for instance, opted for water, Diogenes of Apollonia for air.) Others (such as Empedocles) thought that several corporeal principles were necessary. But it was precisely in limiting their accounts to corporeal principles that they saddled themselves with an unworkable theory, even as regards the natural world.

What is it that makes this brand of materialism unacceptable? It is crucial to recognize that Aquinas does not attribute to the ancients a theory that is obviously false. One might suppose that if "what is not a body is nothing" (75.1c), and if corporeal elements are the first principles of things, then the ancients will be utterly unable to give any but the most reductive, even eliminative, explanations of reality. Instead of being able to say that two things look similar because they are the same color, it may

seem that the ancients would have to say that these things are similar because they share the same underlying corporeal structure, and that indeed there is no such thing as color, strictly speaking, unless ‘color’ is a term of convenience for referring to such corporeal structures. Moreover, it may seem that the ancients would not even be able to account for *structure*, unless they can somehow explain the structure of things strictly and entirely in terms of corporeal elements. (Not in terms of the *position* or *interrelationship* of corporeal elements, but in terms of strictly corporeal elements.) On this reading the ancients would be attempting either (1) a reductive explanation of all things in terms of bodies alone; or, even more radically, (2) the *elimination* of any sort of entity or explanatory principle that is not one of their elemental bodies. Either way, this sort of project looks unattractive and hopelessly crude.

But although the ancient position is flawed, it is not *that* flawed. Aquinas thinks the ancients went wrong in interesting ways; one can’t refute their view simply by showing that we must be able to talk not just about bodies, but also about the states that bodies are in. Indeed, although elemental bodies are in some sense basic on the ancient scheme, it was no part of their project to explain away all the states that might characterize these bodies. In fact, the ancients were ready to countenance properties such as color, size, and shape:

The ancient philosophers . . . did not get far enough to raise their intellects toward something that is beyond the sensible. And so they were aware only of those forms that are proper or common sensible objects. But forms of this sort are clearly accidents, such as white, black, large, small, etc. (*InMet* VII.2.1284).

The ancients did acknowledge forms such as colors and sizes, and Aquinas does not suggest that they advocated the reduction or elimination of such forms in favor of description at a purely corporeal level. What the ancients did claim, however, is that such forms are accidental – which is to say that they are attributes that might come and go while the substance remains the same (see §3.4). Elsewhere, Aquinas describes how such forms were thought to be added onto a thing’s substance:

Because principles must endure, a thing seems to be a principle if it endures through generation and corruption. But matter, which they said was the substance of a thing, endures through every change. Its states, however, are changed: the form, and all the things that are added onto the matter’s substance (*InMet* I.4.74).

Forms, on this account, come and go while the basic corporeal stuff remains the same. (Here Aquinas speaks of *matter*, because he is now talking about the fundamental stuff that makes up the body.)

On the ancient view any body can be analyzed into (1) the underlying elemental matter and (2) accidental forms. The matter is basic and elemental because it endures. Aquinas describes the ancients as arguing from an initial assumption that “principles must endure.”⁴ And it is the underlying material stuff, the ancients supposed, that endures in this way. Gold

is mined from the ground, processed and shaped, melted down and shaped again, *ad infinitum*. What remains the same, every step of the way, is the underlying material stuff: either the gold itself or something even more basic than the gold. Shape, size, and surface color get added on top of this material substratum. So for these ancients the first principles of things are corporeal elements: they are the first principles because they are the simplest stuff that can be found in nature. Aquinas reports (*InMet* I.12.188) that the ancients, in looking for first principles, should have been looking for (1) that which is most simple and (2) that which is most perfect. If they had done that then they would have been led to embrace actuality as their first principle (and God as first among all actualities). But because the ancients concentrated only on the first criterion of simplicity, they focused their search on the most basic stuff that could be found in the natural world. For some this was water, for others air, and so on.

So the ancient position is not crudely reductive, and neither is it simply a generic version of materialism (“the only things that exist are bodies”). On the ancient view, the question of what is a human being becomes the question of what material – fire, water, and so on – serves as the basic principle of life. And when the ancients are understood in this way, their program suddenly begins to look quite similar in spirit to the Human Genome Project, which takes as its basic principles the four nucleotides from which DNA builds its twenty different amino acids. Of course, Aquinas has nothing against learning as much as possible about the physical makeup of human beings; indeed, he regards this as among the most important of human achievements. But he would object to any account, ancient or modern, that purports to describe the *nature* of human beings in corporeal terms. We can now turn to his reasons for this view.

1.3. The argument for soul as actuality

Aristotle, as we saw in §1.1, was struck by the obscurity of questions like *What is a human being?*; he advocates our “separating out” such questions into a more perspicuous form. He goes on to offer a more specific suggestion about how such *What is . . .* questions are to be analyzed: “we are searching for the cause of the matter, and this is the species: that by which the matter is a certain thing” (1041b7–8). Aquinas tries to spell this suggestion out in somewhat more detail:

It is clear, therefore, that in such questions “we are searching for the cause of the matter” – i.e., that on account of which the matter realizes (*pertingat ad*) the nature of what is being defined. And this thing we are searching for, the cause of the matter, “is the species” – that is, the form – “by which [the matter] is a certain thing” (*InMet* VII.17.1668).

As Aquinas understands Aristotle, then, the question *What is a human being?* should be analyzed as the question of what makes this material stuff be human. The general line of reply that Aristotle proposes (and Aquinas

accepts) is that it is form, in the ultimate analysis, that makes the matter be what it is. Form is “the cause of the matter”; it is “on account of” form that the matter “realizes the nature” of what it is.

This proposal puts the disagreement between Aquinas and the ancient naturalists in a stark light. To their way of thinking, certain simple elements are the most basic and general explanation for why a thing is the way it is. There is no deeper account to be had. Aquinas, in contrast, thinks that a more fundamental explanation is available: he thinks that we can always ask, for example, Why is this the matter of a rational animal? And the answer Aquinas believes should be given is one in terms of form. He depicts the ancients as having drawn their theory of soul from their general metaphysical picture: “. . . in keeping with this doctrine, they said that the soul is a body” (75.1c). Aquinas’s reply is to argue that their theory of soul is false; if he is right about that then we will have at least one counter-example to the ancients’ more general account. So if 75.1 is successful it will not only furnish us with a basic account of what soul is, but also refute one of Aquinas’s metaphysical rivals.

To this end Aquinas chooses one of the many arguments that he says he might have chosen: one “by which it is clear in a quite general and certain way that the soul cannot be a body.” Here is the heart of the argument in 75.1c, with each premise assigned a number:

. . . no body can be the first principle of life. For (i) it is clear that to be a principle of life, or to be living, does not hold of a body as the result of its being a body: otherwise (ii) every body would be living, or a principle of life. Therefore (iii) it holds of some body that it is living, or else is a principle of life, through its being *such* a body. But (iv) as for the fact that it is actually such, it has this from a principle that is called its *actuality*. Therefore (v) the soul, which is the first principle of life, is not a body, but the actuality of a body.

The argument has three stages:

1. It derives (i) from the negation of (ii).
2. It derives (iii) from (i).
3. It derives (v) from (iii) and (iv).⁵

It is only the last of these stages that seems questionable. The first stage rests on the evident truth that not every body is (a principle of) living – for example, rocks – and draws the conclusion (i) that bodies are not (principles of) living simply in virtue of being bodies. The second stage relies on this conclusion to draw the further conclusion (iii) that bodies are (principles of) living only in virtue of being bodies of a certain sort – in virtue of being “such a body.” So far, so good.

The third stage stipulates that (iv) what makes a body be of a certain sort is the body’s *actuality*. This apparently amounts to nothing more than a terminological decision, and so there seems no reason for us to hesitate: let us agree that what makes a thing be such is an actuality of the thing. From this stipulation, together with (iii), Aquinas concludes:

(v) The soul, which is the first principle of life, is not a body, but the actuality of a body.

We can take for granted that the soul just is the first principle of life (see §1.1). But do we really have an argument for the conclusion that the internal principle primarily responsible for life is not a body?

Aquinas assumes, in (v), that an actuality is not itself a body. This assumption needs some defense, especially in the present context, when dealing with philosophers who suppose that all things are bodies. And it is not clear that the conclusion follows from earlier premises. For it seems we can accept

(iii) It holds of some body that it is living, or else is a principle of life, through its being *such* a body

without endorsing incorporeal principles of explanation. And

(iv) As for the fact that it is actually such, it has this from a principle that is called its *actuality*

seems to be simply a terminological decision. Certainly, this terminological decision is of tremendous importance for Aquinas's broader metaphysics. In claiming that actuality explains what makes a thing be such (*tale*), Aquinas is making a sweeping claim: *whenever* we want to characterize an object *in any sort of way*, we should do so in terms of the presence (or absence) of something that he calls its *actuality*. As noted already, this is a claim that holds not just for the soul, but in all cases, across the board. We are not told much about this actuality in 75.1. In later articles (e.g., 75.4, 75.5), Aquinas takes for granted that actuality is equivalent to form, and so takes for granted that the soul is a form. But here he doesn't even say that much. Yet what he does presuppose – without explicit argument – is that this actuality is something nonbodily. What justifies that presupposition?⁶

Certainly, one body can make another body be such. This happens when one rock crushes another. Moreover, complex bodies are composed of bodily parts, and these parts can cause the complex body to be such. The heart, a bodily organ, causes the larger body of which it is a part to be such a body. Aquinas acknowledges these facts when he allows that a body can be a principle of life. Here is how he introduces the main argument of 75.1:

It is clear that not just any principle of an operation associated with life is a soul. For if so then the eye would be a soul, since it is a principle of seeing, and the same would have to be said for the soul's other instruments. But we say that the *first* principle of life is the soul. Now although a body could be a principle of life, in the way that the heart is a principle of life in an animal, nevertheless no body can be the first principle of life. For (i) . . . (75.1c).

Aquinas grants that it makes sense to speak of bodily parts as principles of life. Generally, indeed, he is willing to say that bodily parts can be principles of the various operations associated with life. The eye is a principle

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of vision; elsewhere he says that the heart is the principle of movement in animals (20.1 ad 1). Corporeal explanations can be partial explanations. But what Aquinas insists on is that nothing bodily can be the *first* principle of life. From here it follows straightaway that since the soul is the first principle of life, the soul is not a body.

To say that nothing bodily can be the first principle of life is equivalent to saying that nothing bodily can be the primary explanation of a body's being actually such as to be alive. This puts the weight of the argument on (iv), which needs to be understood as follows:

(iv) As for the fact that a body is actually such, it has this [*primarily*] from a principle that is called its actuality.

And now we can ask: why couldn't a bodily organ, such as the heart or the brain, be the first principle of life? Why, for instance, couldn't the Human Genome Project reveal the nature of human beings? Why, to frame the question more generally, are corporeal explanations always incomplete?

One natural line of thought at this point runs as follows. Regardless of which part of the body we point to, we can always ask a further question about why that bodily part explains life. Most crudely, we cannot just point

The human core

Of all the parts of the body, Aquinas (following Aristotle) took the heart to be the best candidate for the first principle of life. Aquinas says the heart is "that by which life is preserved" (18.1 ad 1); "the first principle of movement" (20.1 ad 1); "the instrument of the soul's passions" (1a2ae 48.2c). It was not until William Harvey, in the seventeenth century, that the heart's true function of circulating blood was understood.

Just as we now look to the brain as the most likely material explanation for animal life, so Aquinas looked to the heart. Why didn't Aquinas look to the brain? Aquinas was at least several steps ahead of Aristotle here, inasmuch as Aristotle believed – astonishingly enough (e.g., *Parts of Animals* II.7) – that the function of the brain was to cool the blood (think of the radiator in a car engine). Aquinas recognizes the crucial role of the brain in sensation, and hence in human life (see §§4.2, 6.4, and 9.4), but he also supposes that the heart is somehow the ultimate principle of sensation (see §6.4). Moreover, it is impossible, Aquinas believes, for the brain to account for the operations of will and intellect (see §2.2). All of this gives him little reason to take the brain seriously as a candidate for the first principle of life.

to bodies in general as the explanation of life, because if simply having a body were the cause of life, then all bodies would be alive. But we do little better, Aquinas thinks, even if we start working harder. Obviously it would not do just to point to a human body, and say that that is what makes someone human. For that would not explain the difference between living bodies and corpses. So imagine we work out the physical differences between a living body and a corpse, and that we also work out the complete physical differences between one kind of living thing and another. (I take Aquinas's view to be that plants and nonrational animals are entirely physical things in the modern sense (see §2.3), so in these cases the physical differences should account for all the differences.) Such an account would pass the test suggested by premise (ii) of the main argument, in that we could maintain that *every* body that has this particular stuff is a living being of a certain kind. Why would that explanation be incomplete? What further explanation could be wanted?

On behalf of Aquinas, one might reply that we still haven't found the first principle of life, because we still haven't discovered what is *essentially* responsible for life. No corporeal account could qualify, because there is no essential connection between having life and any *corporeal* stuff. While certain corporeal stuff might, as a matter of contingent fact, serve to distinguish the living from the dead, this is just a contingent fact. If the world had been different then there might be other kinds of corporeal stuff producing life, and other kinds of corporeal stuff producing life of this kind. But that then shows that no corporeal stuff can be the *first* principle of life.

If this is Aquinas's view then he is committed to quite a broad thesis about the nonessential nature of properties. For recall how Aquinas thinks his argument about soul generalizes: heat too, he says, "is not a body, but the actuality of body" (75.1c). Aquinas would have to insist that no corporeal account of what brings about heat – for example, the motion of molecules – can show what is *essentially* responsible for heat. There is always the possibility, for heat as well as for any other natural property, that that property might have had some different sort of physical instantiation.

This isn't an obviously implausible idea, even when extended quite broadly over all natural properties. But I see no evidence that Aquinas was committed to this thesis, or that he even considered it.⁷ Moreover, there is a simpler interpretation. We should take Aquinas seriously when he says that the appeal to a body is explanatory only in virtue of its being a body of such and such kind. *Whenever* one attempts a corporeal explanation – in terms of the heart, say – one is actually appealing to the form or actuality of that body. One appeals to the structure and function of the heart, not to the physical stuff that composes the heart. And even when one focuses on the physical stuff, one is still focusing on the structure of that stuff. So if we could give a complete scientific account of how living bodies differ from corpses, we *would* thereby capture precisely what gives an

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animal life. This would be the first principle of life, the soul. Yet such an explanation would still be an explanation in terms of form or actuality. For Aquinas, it is always actuality that is explanatory.

On this reading, Aquinas's argument no longer appears very controversial. It not only is consistent with materialism in its modern form, but also seems quite modest in its theoretical implications. The Human Genome Project need no longer fall afoul of 75.1, because it too might be formulated in terms of structure and function, rather than in terms of the crude insistence that human beings are just a list of chemical elements. In fact, the argument now seems so modest as no longer to pose any difficulty for the ancients. Aquinas seems to argue against them simply by pointing to the existence of actuality – as if the ancients, for whom all things are bodies, cannot account for such a thing. Yet on any charitable reading of the ancient position it seems that they do allow for actuality (see §1.2). We should wonder, then, what Aquinas means by 'body' when he reports that for the ancients "the only things that exist are bodies, and that what is not a body is nothing" (75.1c). Surely the ancients believed not just in bodies *simpliciter*, but in bodies of such and such kinds. (Indeed, what the ancients notoriously quarreled over was precisely what *kinds* of bodies to postulate as basic.) It is beginning to look, then, as if these ancient naturalists are simply straw men. No corporeal theory could be so crude as to postulate only bodies *simpliciter*, but as soon as one begins talking about bodies of such and such nature, it seems that one is no longer subscribing to a corporeal theory.

This is not a happy outcome. Aquinas clearly takes himself to be refuting a serious philosophical error, and so no interpretation can count as adequate until it clearly identifies what that error is supposed to be. If the ancients' error was a real one, it must be not simply that they failed to talk about bodies of such and such kinds – no one would make that mistake – but that they somehow failed to do so in an adequate way. So we should not suppose that when Aquinas describes the ancients as holding that only bodies exist, he means that they tried to do without actuality. The argument of 75.1c suggests as much, by holding up the ancients as defenders of a purely corporeal theory, and then showing that actuality is something different from body. But no one could do without actuality, given how Aquinas defines it. The ancients, then, must have gone wrong not because they left out actuality entirely, but because they failed to conceive of actuality in the proper way.

At this point, however, the Treatise offers us little help. Aquinas is ready to move on. Enough said for beginners, or so he supposes. We have been given as much of an Aristotelian orientation as he thinks is necessary – even if the argument is not adequate as a reply to any serious version of ancient naturalism. The opening article of the Treatise therefore poses something of a puzzle. In the last section of this chapter I suggest that we can solve this puzzle only by entering into some rather murky issues in Aquinas's metaphysics. The connections here are ones that he does

not clearly spell out, in the *Treatise* or elsewhere, but that allow us to make good sense of an account that would otherwise look confused and misguided.

1.4. The crucial role of prime matter

The ancients, I have suggested, did not neglect actuality entirely; instead, they somehow erred in deploying the notion. One possibility is that the ancient mistake amounted to their simply not *recognizing* the role of actuality in their theory. Even though they supposed “that the only things that exist are bodies, and that what is not a body is nothing,” we might say that even their own theories couldn’t stick with this maxim. There is some nearby textual evidence for that reading, in the remark that “. . . the ancient natural philosophers did not know to distinguish between actuality and potentiality” (75.1 ad 2). So perhaps the ancient mistake lay simply in misdescribing their own view. If they had grasped what actuality is, they would have seen that even their own accounts rested on things being in actuality (being *such*), and they would have realized they were not offering strictly corporeal theories. If that is right then the dispute seems largely a matter of terminology, as if Aquinas is objecting not to the ancient theories *per se*, but to the way the ancients described their theories.⁸

The issues are more subtle and difficult. Although the ancients did not draw a distinction between potentiality and actuality, they did rely on actuality in their thinking. Their error was to build this actuality into the ground level of their metaphysics. Actuality, for the ancients, is either something accidental, added on, or else it is a primitive, unanalyzable part of their basic corporeal elements. Aquinas believes that the fundamental ancient mistake was their failure to recognize the priority of actuality.

The pivotal issue is the role of matter. Aquinas believes that the ancient mistake stems “from ignorance about matter” (*InMet* VII.2.1285). Because they got matter wrong, they went wrong about the first principles of things, and held that “only matter is a substance” (*ibid.*) – that is, only matter is a basic principle. Here is how the ancients conceived of matter:

The subject as a whole, which we claim to be composed of matter and form, they said was prime matter: air, water, or something of that sort. They said that forms are what we call accidents, the quantities and qualities whose proper subject is not prime matter [as they supposed], but the composite substance that is the substance in actuality (*InMet* VII.2.1284).

Diogenes of Apollonia, for instance, supposed that “air is the principle of all things” (*InDA* I.5.150–51), and he identified the soul with air. On this sort of theory, air becomes prime matter. The ancients allowed forms into their account only to the extent that these forms were added onto prime matter; in the terms of Aquinas’s theory, the ancients allowed only accidental forms (see §1.2, above, and §3.4). The ancients didn’t allow forms as constituent parts of their elemental bodies, and therefore

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Aquinas describes these bodies as playing the role of prime matter in their account.

The mistake in all of this is that the ancients fundamentally misunderstood what matter is: "... the ancient naturalists, who claimed that prime matter is something actually existent – e.g., fire, air, or something like that ..." (76.4c). On the ancient view, actuality is built into matter at the most basic level. The basic, primary stuff has its own actuality, it actually exists, and so for the ancients there is no way to distinguish body from actuality at this level. Aquinas, in contrast, takes himself to be following Aristotle when he insists that genuinely prime matter has no actuality at all. Such pure potentiality cannot exist without actuality; or rather, prime matter does not exist at all in its own right:

Matter ... is never stripped of form and privation, because at one time it exists under one form, at another time under another. But in itself (*per se*) it can never exist, because given that by its nature it has no form, it has no actual existence, since actual existence comes only through form, whereas it is solely in potentiality. (*De principiis* 2.112–18 [349]).

Indeed, one cannot even speak of different pieces of prime matter, because there is nothing to individuate the stuff: "prime matter is numerically one, across all things" (*De principiis* 2.98–99 [348]).

The mistake of the ancients lay in supposing that certain actualized bodies were first principles and underlying, enduring substances. Aquinas believes that a body always admits of further analysis into matter and form, potentiality and actuality. Remove all actuality and one arrives at prime matter. Bodies, since they are three dimensional (see §1.1), are never prime matter. The ancients, in contrast, took certain bodies to be prime matter, which precisely means that they thought no more basic analysis was possible. Any actuality that their primary bodies might have was built into the matter as an indistinguishable part and so they must reject

(iv) As for the fact that a body is actually such, it has this [*primarily*] from a principle that is called its actuality.

Although the ancients did recognize actuality at the level of accidental forms, they nevertheless denied any such distinction within their basic explanatory principles, and so they were unable to see the fundamental priority of actuality.

It is this conception of prime matter as something intrinsically actualized that leads the ancients to describe the soul as a body. Because their basic corporeal principles contain actuality, these principles appear to be good candidates for explaining the basic functions of life: cognition and movement. Aquinas thinks that when one recognizes the nature of genuine prime matter, one will recognize that such matter cannot be explanatory. For Aquinas, explanation in terms of prime matter is inconceivable; matter can explain only insofar as it is actual. Far from being explanatory, prime matter is not even intelligible in its own right:

Materia spiritualis

Aquinas says that the possession of dimensions “is what first inheres in matter” (3.2sc). This means that possessing dimensions is one sort of actuality that can *always* be found in any actual matter. So no matter exists that does not have dimensions. But since having dimensions is just what it is to be a body, it follows that all real (i.e., actual) matter is bodily, corporeal matter.

This may not seem like a remarkable result. But many of Aquinas’s contemporaries – including Roger Bacon, Bonaventure, and John Pecham – would have rejected the conclusion. In fact, it was very common in the Middle Ages to suppose that all beings other than God are composed of form and matter (see Dales 1995, Lottin 1932). The classic source for this doctrine of universal hylomorphism is the *Fons vitae*, a work by the eleventh-century Jewish philosopher Avicbron. On this view the angels have a kind of *materia spiritualis*, as does the human soul. Such matter had enormous theoretical appeal, inasmuch as it could be put to all kinds of metaphysical work. Aquinas resists all such temptation, however, and he accordingly has to work harder, using fewer ingredients, to explain the soul’s nature.

Prime matter cannot be known through itself, because everything that is cognized is cognized through its form, whereas prime matter is viewed as subject to every form (*InPh* I.13.118).

We can grasp things only inasmuch as they exist in such and such ways. But prime matter, by definition, does not exist in any way, and so cannot be grasped, in and of itself. Not even God can have an idea of matter, apart from his idea of the whole composite (1a 15.3 ad 3).

If prime matter is unintelligible, then how do we manage to identify this mysterious basic stuff? Following Aristotle’s remarks in *Physics* I (191a9–12), Aquinas speaks of our knowing prime matter “through analogy to form” (II *SENT* 17.1.1 ad 4). He spells out what he takes to be Aristotle’s argument as follows:

Every definition and every cognition occurs through a form, and therefore prime matter cannot be cognized or defined per se, but through comparison. So it is said, for instance, that prime matter is that which is related to *all* forms and privations in just the way that bronze is related to image and shapeless (*De principiis* 2.78–84 [346]; see II *SENT* 12.1.4c).

We use the word ‘bronze’ to point to the material itself, apart from whether it has been cast into an image (form) or lacks meaningful shape (privation). Similarly, Aquinas suggests, prime matter is supposed to be the matter itself, putting to one side any state the matter might be in. This is how we

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come to our idea of prime matter, such as it is. The ancients failed to conceive of matter in this way because they built actuality into their basic corporeal stuff, with the result that they took this corporeal stuff to play an explanatory role that, for Aquinas, only actuality can play.

At this point, any Humeans who are still reading will surely be getting restless, if they have not tuned out altogether. What started out as a rather clear and well-defined problem (or so I claimed) has become quite murky and metaphysical, particularly now that prime matter has been introduced. The notion of prime matter has struck many people as odd and mysterious, in part because it seems peculiar to insist on the importance of a thing that does not and cannot exist. How can that which in itself is not just unknowable but even nothing be an important part of any philosophical analysis? Yet if prime matter is not nothing, then is that not to say that it is a thing of such and such sort, and therefore actual?

These questions are obscure enough that we should wonder whether Aquinas's account is truly an improvement on the ancients. He has a variety of highly complex reasons for thinking that it is, reasons which I introduce here and develop further in the remainder of Part I. The most straightforward of these reasons is that his account better fits empirical facts about how the physical world undergoes change. We have seen already (§1.2) how the ancients suppose that the basic principles are the most simple things that underlie and endure through all change. Aquinas accepts this as one kind of criterion for a basic principle. Prime matter, whatever it is, "is neither generated nor corrupted"; if matter were generated from something else, then that matter would have some further underlying matter (*De principiis* 2.90–96 [347]; see *InMet* XII.3.2443). It is the most basic, simple stuff: "that at which the analysis of natural bodies ultimately stops" (II *SENT* 12.1.4c). Both sides, then, agree on the tests that ultimate matter must meet: prime matter is, in short, the most basic stuff that underlies all change. The ancients supposed that their chosen elemental bodies could meet this test:

For instance, if water were their material principle, then they said that water was never corrupted, but that it remains in all things as their substance, while air, gold, and other such things were said to be corrupted and generated over and over (*InPh* II.2.149).

Yet this assumption is empirically false. "We empirically observe that the four elements are generated from one another. . . . Therefore it is unacceptable to suppose that these four elements are the first principles of things" (*InMet* I.12.191). The only sort of matter that can be a principle in this sense is Aristotelian prime matter, which "goes to make up the substance of each and every natural thing" (*InPh* II.2.150; see *InGC* I.2.14–16).

Viewed in this context, the disagreement between Aquinas and the ancients centers around a seemingly well-defined empirical question: What basic stuff endures through all change? Aquinas and the ancients agree that

it is this stuff, whatever it is, that deserves to be called *matter*; where they disagree is over what they identify as matter. But I believe a deeper metaphysics lies behind these texts. Aquinas is not just disagreeing with the ancients on a few narrow empirical questions; he is offering a fundamentally different metaphysical analysis of the world. Though a full development of this claim will have to wait (especially for the *Excursus* to Part I), I conclude this chapter with a sketch of the account.

We have seen how the ancients believed only in bodies, and took their most basic bodies as prime matter. We have also seen how Aquinas insists on distinguishing form and matter, even at the most basic level, and how this leads him to insist on prime matter as purely potential. An obvious thought, in light of all this, is the following: the ancients identified only one part of reality, the material part, whereas Aquinas shows how reality actually has two sides, potentiality and actuality. In place of the ancients' reductive materialism, then, Aquinas offers a dualism of matter and form.

This is a thought we should quickly reject. Matter cannot be a thing in its own right; it exists only insofar as it is actual. But there is a temptation at this point to retreat just a step, retract the claim that matter is an actual part of Aquinas's ontology, and still continue to insist that matter is stuff of some sort (the stuff that underlies all change), albeit incomplete stuff that needs form in order to exist. This too is a view I want to reject. If this modified account were right then corporeal substances would remain split in two, one part matter and one part form. Aquinas rejects any such division. A substance is just one thing, he believes; the matter and the form are conceptually different, but there is no real difference, no way to split the material part off from the formal part. These are simply different ways of describing the same thing. Aquinas does not ascribe to a metaphysical dualism of matter and form, potentiality and actuality. His is a reductive hylomorphism.

But if Aquinas is not insisting on a metaphysical distinction between matter and actuality, then how does he differ from the ancient naturalists? There is of course a difference in their explanatory strategies. Aquinas appeals to both formal and material explanations, whereas the ancients are said – albeit with some exaggeration, as we have seen – to rely only on material explanations (*InMet* VIII.4.1737). But the disagreement runs deeper. For whereas the ancients believed that “the only things that exist are bodies” (75.1c) and that all things consist of certain basic corporeal elements, Aquinas is committed to the view that actuality is the only fundamental reality. Everything that exists does so insofar as it takes part in this fundamental reality. The building blocks of Aquinas's metaphysics are not bodies, but various kinds of actuality. This is the deeper picture I develop through the remainder of Part I.

Soul as substance

The human soul is subsistent, which is to say that it is in some way an independent substance. This does not mean that we are our souls, because human beings have an essential bodily component (§2.1). Our soul's subsistence is a matter of its having a function – thought – that it performs on its own, independently of the body. More hangs on this argument than on any other passage in the Treatise, but it unfortunately seems to be one of the weaker arguments of the Treatise (§2.2). Unlike the rational soul, the souls of other animals are not subsistent, because sensation requires the body. Indeed, for Aquinas, sensation is a wholly corporeal activity. Aquinas is therefore a materialist regarding sensation, whereas he rejects materialism in the case of the mind (§2.3). Yet Aquinas is not a dualist in any meaningful sense, and his account of the soul-body relationship is an entirely consistent application of his broader metaphysical principles (§2.4).

2.1. The essential bodily component

Aquinas begins the Treatise with a striking characterization of his subject matter. Human beings, he says, are “composed of a spiritual and corporeal substance” (75pr). It is hard to imagine, at first glance, a clearer statement of the dualist doctrine: the human mind is one thing, the human body another, each its own independent substance. This reading seems to find confirmation in 75.2, where Aquinas argues that the human soul subsists on its own. Here he links being subsistent with being a substance, quoting from Augustine approvingly (“it is the nature of mind both to be a substance and not to be corporeal”) and explaining that to be a substance in this context means to be subsistent (sc). So there can be no doubt that Aquinas regards the soul as a substance.

It is then no wonder that Aquinas is often characterized as a substance dualist, and thereby located in the venerable, if implausible, tradition of Plato and Descartes. To assess this characterization, however, we first need to understand what he means by saying that the soul *subsists*. This is a term that barely survives transplant from Latin into English; to say that a thing subsists is to say virtually nothing at all, because the word ‘subsist’ has no settled meaning or even connotation in English, even as a technical philosophical term. So we may translate Aquinas as claiming that the soul subsists, or is subsistent, but this is scarcely the beginning of an explanation.

2. SOUL AS SUBSTANCE

Still, before turning our attention to the soul's alleged subsistence, we can see one obvious respect in which Aquinas does not embrace the most extreme form of substance dualism. Unlike Plato and Descartes, Aquinas explicitly and vehemently denies that human beings should be identified with their souls. His view is presupposed by 75pr: "... human beings, who are composed of a spiritual *and* corporeal substance." It is present in 75.2 as well, when Aquinas concedes in the face of the first objection that the human soul is not fully a particular thing, but merely "*part* of the human species" (75.2 ad 1). These, however, are merely statements of a view, not arguments. Aquinas's argument comes in 75.4, where he concludes that "a human being is not soul alone, but something composed of soul and body."

The argument of 75.4 rests on a claim about how we should delineate objects – how, in other words, we should determine where one object ends and another begins. Am I, a human being, just my soul? Or am I my soul and my body? Or am I my soul, my body, and my clothing? And so on. Aquinas offers the following as a test: "any given thing is identified with what carries out the operations of that thing" (75.4c). So to decide what a human being is, we need to determine what the operations of a human being are. Aquinas reasons in 75.4 that human beings must be said to engage in sensation. But because sensation is plainly an operation carried out by the body (wholly by body? see §2.3), human beings must be not just their souls, but soul and body.

The argument seems clear and attractive, but one certainly might wonder about a number of points. First, Aquinas seems to think that sensation is the only operation that requires us to identify human beings with their bodies as well as souls. Speaking of the Platonic view that identifies us with our souls, he remarks,

This [view] evidently *could* be maintained, if it were held that the sensory soul's operation belongs to it alone, without the body. For in that case *all* the operations attributed to a human being would hold of soul alone (75.4c).

The second sentence seems plainly false. Even if we attribute the sensory soul's operations to the soul alone (this would include not just sensation, but also memory and the emotions (see §8.4), among other things), there are still other operations that we attribute to human beings, and which obviously do require a body. What about playing football? What about walking to the store? Aquinas's exclusive focus on sensation seems unjustified.

Here is a second difficulty. Aquinas's test was that "any given thing is identified with what carries out the operations of that thing." But once our thoughts begin to run over the wide range of operations that might be attributed to a human being (fishing, talking on the phone, playing the piano, reading a book), it looks as if these operations are carried out not just by our soul and our body, but also by the various tools that we use. So, if we accept Aquinas's test, it is hard to see why a telephone, or a piano, is any less a part of me than are some parts of my body.

2.1. THE ESSENTIAL BODILY COMPONENT

The obvious reply to this objection is to draw a distinction between things that I use as instruments and things that are part of me. But this wouldn't get Aquinas very far. For although he often does draw a distinction between agent and instrument, he regularly refers to our bodily organs, including the sensory organs, as instruments. Indeed, in 78.1c he writes that "our entire bodily nature is subject to the soul, and is related to it as matter and instrument." (He refers to the senses as instruments at 75.1c, 76.5c, *InDA* I.2.46–69.) So my body is an instrument, on Aquinas's way of thinking. What, then, makes it different from the other instruments on which I rely? What makes it part of me?

Both of these objections can be handled at once if we revise Aquinas's test so that it concerns only those operations that are *essential* elements in my functioning as a human being. The test would then read: "Any given thing is identified with what carries out the ESSENTIAL operations of that thing." By an essential operation, I do not mean an operation that every human being must engage in, but an operation that every human being must be *capable* of engaging in, in order to count as human. For Aquinas, sensation and thought are the essential human operations. Playing football and walking to the store are not essential in this way. It seems clear, on reflection, that no essential human operation requires any sort of instrument like a telephone. But the body is required, or so Aquinas argues, because we cannot engage in sensation without the body.¹

We can now see, then, that Aquinas's argument in 75.4 rests on some crucial assumptions about what sorts of operations are essential to being human. And now that these assumptions are out in the open we can see that here too there is room for doubt. We might, first, try denying that sensation is a requirement for being human, as Plato in effect argues in the *Phaedo*. But suppose we grant this point, against Plato, since it is so hard to imagine that our lives could be considered human if we lacked all sensory experience, all emotion, and all desire.² Here, still, there is another difficulty. For if what is essentially human are the experiences associated with sensation and emotion, then we need to question whether the body is required for us to have these experiences. Aquinas supposes that the operations of the sensory soul do require the body:

Sensing, and consequently the operations of the sensory soul, clearly do occur with some transformation to the body: in seeing, for instance, the pupil is transformed by the species of a color, and the same is evident in other cases (75.3c).

But we might wonder, now following that other great proponent of substance dualism, Descartes, whether the essential aspect of sensation and emotion – the way it feels to have these experiences – actually requires the body. If the basic experience of sensation is an operation of the soul, not the body, then the body might well be dispensable. Aquinas speaks of the pupil's being transformed by a likeness of color. But might we be able to have sensations, and color experiences, without that particular bodily organ? The sense of sight is adapted to our particular environment, and is

necessary for us to see – given the world we now live in. But this seems to be a contingent fact about our present life, and not at all an essential part of being human.

If what is essentially human is sensation itself, and not the particular bodily mechanisms that put us in touch with our present environment, then it seems that Aquinas needs to show that the body is required even for the very experience of sensation. I believe that Aquinas is ready to make this very claim. There is no gap at this point in the argument, because Aquinas believes that sensation is a wholly bodily process. From the eye's focusing of light rays to the brain's generation of experiences, the process is a physical, corporeal one. This is a controversial reading of Aquinas, one for which further argument is needed (see §2.3). But we now have some preliminary reason for thinking that this must be Aquinas's position: the rejection of extreme substance dualism in 75.4 depends on holding (contrary to Plato) that the capacity for sensation is an essential part of being human, and on holding (contrary to Descartes) that sensation, even in its essential respects, requires the body.

2.2. The rational soul as a subsistent form

What does it mean when 75.2 claims that the human soul is subsistent? Aquinas regularly links subsistence and substancehood, saying, for instance, that “it is characteristic of a substance to subsist on its own” (III *SENT* 6.1.1.1c; and see 75.2sc). This suggests that we might come to understand subsistence by studying Aquinas's theory of substances. But this strategy will not work. First, Aquinas employs a notion of substance that is much weaker than what we would expect. He thinks that a human hand counts as a substance, for instance, even though a hand is part of a larger substance, a human being (see §2.4). So it is not at all obvious what Aquinas thinks substances are. Second, Aquinas treats the notion of subsistence as prior, and uses it to analyze the notion of substance. He holds that for something to be a substance it must (a) subsist and (b) be the underlying subject of accidents (I *SENT* 23.1.1c; *QDP* 9.1c). So the conditions for substancehood are stricter than those for subsistence, and the notion of subsistence is required to explain what substances are. No wonder, then, that Aquinas usually refers to the soul as subsistent, and only occasionally speaks of it as a substance. The former concept is the more basic one.³

We should put the soul's substantiality to one side, then, and focus on its subsistence. Aquinas is not very explicit about this notion in the *Treatise*, but earlier in *ST* he offers this criterion: “we say that things subsist that have existence not in others, but in themselves” (29.2c). Elsewhere he offers this same criterion in somewhat different terms: a thing subsists when it “doesn't need some outside foundation in which it is sustained, but is sustained in its own self” (*QDP* 9.1c). Accidents provide the clearest examples of things that do not subsist, because it is precisely the nature of

accidents to exist in other things.⁴ The example of heat figures here once again. In 75.1, heat was analogous to the soul in being nonbodily (see §1.1). In 75.2, heat is disanalogous because it is nonsubsistent. As an accidental form that exists in a body, heat does not, and could not, exist on its own. Accidental forms are not the only things that fail to be subsistent. In 75.3 Aquinas argues that some substantial forms fail the test. Specifically, he argues that the substantial forms of nonhuman animals – their souls – are not subsistent. Nonrational souls exist in a body, and are dependent on that body for their operation (see §2.3). It is in fact a peculiar feature of human souls, among all embodied substantial forms, that they “do not exist in matter in such a way that their existence depends on matter” (*SCG* II.51.1268). Nonsubsistent substantial forms are therefore known as material forms. Aquinas then summarizes his view in 75.2 ad 2: “something can sometimes be said to exist on its own if it does not inhere as an accident or a material form.”⁵

This last statement describes a way in which subsistence can “sometimes” be understood. Aquinas in fact has two senses of subsistence (and two senses of substancehood), and the above account applies only to the weak sense. In this weak sense, something subsists even if it is a part of something larger that is itself subsistent. Something is strongly subsistent, in contrast, if and only if it subsists in the weak sense and “has the complete nature of some species” (75.2 ad 1). What Aquinas rules out, with this addition, is something that might subsist in the weak sense and yet be a part of a complete substance. Examples of things that are strongly subsistent are human beings and other animals. Examples of things that are weakly subsistent are the human soul, and also a hand (85.2 ad 1; cf. 3a 16.12 ad 2 and *QDUVI* 2c).

This dual account of subsistence suits Aquinas’s broader thinking about human nature. As §2.1 showed, he believes that the human soul, by itself, is only part of a complete human being. A complete member of the human species must have body and soul, and it is natural for Aquinas to want a strong notion of subsistence under which only complete members of a species qualify. It is also natural for Aquinas to be attracted to a weaker notion of subsistence that includes the human soul. After all, he needs to leave room for the human soul to exist on its own, after death, apart from the body (see §12.2). So in arguing for the soul’s weak subsistence, Aquinas is laying a cornerstone on which much of his subsequent theory rests.

Standardly, substance dualists have argued for their position by trying to show that the mind or soul could continue to exist even after the body has gone out of existence. The question then becomes whether a disembodied mind is possible, where possibility is usually taken in the logical sense. If it is possible for the mind to exist without the body, then (the argument runs) the mind must be an independent substance. For only substances can exist on their own. This is not how Aquinas argues. In 75.2 he does not even raise the question of whether the soul could continue

existing in the absence of the body. Aquinas does (in 75.6) present a series of arguments intended to show not just that the soul could survive without its body, but that the soul necessarily does survive without its body. The human soul, he argues there, is imperishable. But Aquinas places these arguments *after* his arguments for the soul's subsistence, and indeed the key argument there presupposes that the soul is subsistent (see §12.1).⁶

In general, Aquinas cannot accept that separability and subsistence are mutually entailing. My hand is subsistent, for instance, but not separable from my body, because a hand apart from its body is a hand in name only (76.8c; §2.4). The soul is in this regard a special case: "it is not dependent on the body for its existence" (*SCG* II.69.1465). Still, Aquinas doesn't stress the inference from separability to subsistence, because he wants to argue from a different premise. Rather than base 75.2 on appeals to what could conceivably happen after death, Aquinas asks whether the soul has an operation that it performs on its own. He spends the bulk of his reply establishing an affirmative answer to that question, concluding that "the intellectual principle, which we call mind or intellect, has an operation on its own (*per se*) which the body has no share in."

Based on this premise, he infers that the human soul is subsistent (and then goes on, in 75.6 and Q79, to infer its separability from body). That first inference rests on the following claims, which he introduces immediately after reaching the above conclusion:

- (1) Nothing can operate on its own (*per se*) unless it subsists on its own, because
- (2) every operation belongs to something actually existent.

(1) is logically equivalent to the claim that independent operation entails subsistence. (2) provides a plausible rationale for (1). If something can operate on its own then it must be able to operate independently of other things. If that thing exists in something else, like an accident or a material substantial form, then it would be entirely dependent on that other thing, and could not even exist without that thing. But existence is a prerequisite for any operation. Therefore a thing's operating on its own entails its subsisting on its own (and also entails separability).

By asking whether the soul has an independent operation, Aquinas might seem to be establishing something beyond simple subsistence. It is one thing for the soul to exist on its own, and something further, we might suppose, for it to operate on its own. But in fact Aquinas thinks that these claims are mutually entailing, as the next article reveals:

Since the souls of brute animals do not carry out their operations on their own, they are not subsistent. For all things have existence and operation in a similar way (75.3c; see *InDA* I.2.94–97).

Here Aquinas runs the inference in the other direction – subsistence entails independent operation – and then suggests that there is in fact a biconditional: a thing's mode of existence and its operation go hand in hand. It is

harder to see why the inference in this direction should be true. Couldn't our soul, for instance, exist without the body and yet be unable to function? Aquinas thinks not. One of his reasons seems to be teleological: he thinks that there wouldn't be any point to a thing's existence if it were unable to function: "things exist for the sake of their operations" (*SCG* II.60.1385). A stronger reason comes from considerations discussed in §2.1. Aquinas believes that a thing is defined by its operations. The principle he establishes is that "any given thing is identified with what carries out the operations of that thing" (75.4). For the human soul to be unable to function would be for it to stop being human, to stop existing as a human soul. When a thing can no longer operate it goes out of existence; it becomes something else. (I discuss this issue at greater length in §12.2.)

Aquinas therefore believes that asking whether the human soul subsists on its own is the same as asking whether it operates on its own. He chooses to investigate the latter question, hoping to derive the soul's subsistence from its independent operation. The advantage of this procedure is that it allows Aquinas to address an issue that he regards as much more amenable to investigation. If we focus our attention on whether the human soul can exist on its own, disembodied, then it is very hard to know what to say. How do we test this hypothesis? The problem is daunting for at least two reasons. First, it apparently raises a question about the soul's basic ontological status. But how are we supposed to decide that? It is hard enough to settle even the most basic questions about the soul (most basically: do we have a soul?), let alone the hard metaphysical ones. Second, the question posed is a modal one – that is, it asks about what could be the case, not what actually is the case. It is not at all clear how such questions ought to be investigated, or even what it is that makes such modal claims true.⁷

Aquinas shifts our focus from the soul's intrinsic nature to its operations, and from what could be the case to what actually is the case. It is a far more tangible problem, he believes, to focus on the soul's *operation*; that is something we are immediately confronted with. This strategy accords with Aquinas's general methodological principles for dealing with the soul (see §§11.1–11.3). "Our intellect has cognition of itself not through its essence, but through its act. . . . We grasp the human mind's nature on the basis of intellect's act" (87.1c). We cannot, then, just look into our souls and discover whether we have an immaterial, subsistent part. Such conclusions can be reached only through inference, based on the character of the operations in which the soul engages. This isn't an easy thing; it's not something we can discover through inspection. What's needed, instead, is "diligent and subtle investigation" (87.1).

The first step toward establishing the rational soul's subsistence is to establish both that the intellect is not a body and that it does not operate through a body. This is the heart of the argument for the soul's subsistence, because from these conclusions it follows straightaway that the rational soul has an

operation of its own and hence subsists on its own. It may seem surprising that Aquinas is once again arguing for the soul's incorporeality: wasn't this already established for all souls back in the previous article (see §1.3)? But here the subject is "the principle of intellectual operation," and though Aquinas is willing provisionally to identify this principle as the human soul (see the start of the main reply), he will not strictly be entitled to that identification until later. So the conclusions here apply directly to the intellectual principle, and we are invited to suppose that what holds for it holds for the soul, even though at this point the two stand in a somewhat uncertain relationship. (For detailed discussion of this provisional identification strategy and its implications, see §5.4.) Strictly speaking, this intellectual principle is not the intellect, but the underlying substance of which the intellect is a power. But since this makes no difference to the main thrust of the argument, I hereafter speak of intellect, not of the intellectual principle.

The second conclusion, that the intellect does not operate through a bodily organ, might easily be misunderstood. It might look as if Aquinas is denying the body *any* role as an intermediary in intellectual cognition. Yet clearly there is a sense in which the intellect does operate *through* the body, inasmuch as the intellect receives information about the world through the senses (84.6–8). In this regard the senses do mediate intellectual thought. Aquinas wants to make it clear, however, that the intellect does not have an organ in the way that the sensory powers do. The soul's sensory powers are forms and not bodies, but still the sensory part of the soul operates "through a bodily organ" in that these powers actualize the sensory organs. Sight, for instance, is a composite of a form (the visual power) and a bodily organ (the eye). The intellect, in contrast, is not the actuality of any body (76.1 ad 2–3), a claim Aquinas can make only if he establishes here that it does not have a bodily organ. Intellect is not a composite of form and body, but pure form.⁸

In 75.2, Aquinas offers two variations on the same argument to show that (a) the intellect is not a body and (b) it does not have a bodily organ. Each variation rests on the same initial premise,

1. "Through intellect a human being can have cognition of the natures of all bodies,"

and on closely related versions of a second premise:

- 2a. "That which can have cognition of certain things must have none of those things in its own nature."
- 2b. "The determinate nature even of a bodily organ would prevent the cognition of all bodies."

From these premises, Aquinas reaches his twin conclusions:

... [3a] it is impossible for the intellectual principle to be a body. [3b] It is likewise impossible for it to cognize intellectually through a bodily organ (75.2).

Aquinas believes that the first premise needs no defense: it is, he says in 75.2, *clear*. To understand why he thinks this claim is clear, notice first that there are two ways in which the claim is weaker than it might initially seem. First, rather obviously, Aquinas does not say that our intellect can grasp the nature of *everything*. The conclusion he wants does not require such a strong claim, and moreover Aquinas would not defend such a strong claim. We cannot, for instance, fully comprehend God's nature (12.7; see §11.4). His claim, then, is made only with respect to bodies. Second, and somewhat less obviously, Aquinas does not say that the intellect can cognize everything about bodies. What he says, instead, is that we can grasp the *nature* of all bodies. This means that the intellect has the potential to reach an understanding of the essence of anything corporeal, of the defining features of bodily things. (On natures, see §In.3; on grasping essences, see §5.5). There are some features of the physical world that the intellect cannot apprehend. The intellect is unable, for instance, to cognize particular things as particular (86.1). But Aquinas's claim here is not that the intellect can grasp the sensory world in all respects. He is making the weaker claim that the intellect can potentially think about and come to understand the nature of any given part of the physical world.

On the contrary, could there not be some parts of the physical world that we cannot understand, even in principle? (Some have proposed that consciousness is an example (see §11.3).) Aquinas can reply by insisting that he is making a still weaker claim. He is not supposing that our intellect can comprehend every process that takes place in the physical world. Some truths may be out of reach, even in principle, and some phenomena may be incomprehensible. All Aquinas needs to claim is that there is no *kind* of corporeal stuff that we are inherently precluded from cognizing. If it is true, for every kind of corporeal stuff, that we can potentially have an intellectual cognition of that stuff, then it will follow (given premises 2a and 2b) that the intellect functions independently of that stuff. Here is how Aquinas makes this point:

The intellect is capable of cognizing not only one kind of sensible stuff (as is the case for sight or hearing), or only common or proper accidental sensible qualities,⁹ but instead, universally, all of sensible nature. Thus, just as sight is lacking in a certain kind of sensible stuff, so intellect must lack all sensible nature (*InDA* III.7.164–70).

The comparison between intellect and the senses is instructive. Sight, like the other senses, is a specialized power, designed for detecting only one part of the physical world, the colored and shaded part (see §§6.2 and 6.3). The bodily organs responsible for sight reflect this specialization: the inner part of the eye is uncolored and transparent, because any sort of color would interfere with the eye's ability to perceive all colors. ("The pupil, which is capable of receiving all colors, lacks all color" (*QDA* 2c).) The intellect is not specialized in that way; we can think about the impressions received through *any* of our bodily senses. Whereas each of the senses has

its specialized realm of application, the intellect is capable of reflecting on the sensory world in all of its modalities. This is not to deny that some facts might inevitably elude us. The point is rather that our intellects are not barred from grasping any part of the physical world simply in virtue of the kind of physical stuff that is involved. This claim seems at least plausible.

Aquinas realizes that neither version of the second premise is self-evident, and so he offers the following argument.

(2a) That which can have cognition of certain things must have none of those things in its own nature, because that which exists in it naturally impedes its cognition of other things. In this way we see that the tongue of someone ill, infected with a jaundiced and bitter humor, cannot perceive anything sweet; rather, all things seem bitter to that person.

(2b) The determinate nature even of a bodily organ would prevent the cognition of all bodies. Analogously, if there were some determinate color in one's pupil, or even merely in a glass vase, then the liquid inside the vase would seem to be of the same color (75.2).

Essentially the same argument is made for each claim. Yet it is surprisingly difficult to determine precisely what that argument is. I will focus on 2a, which holds that for any faculty F to apprehend x , y , and z , it must be the case that F does not have x , y , or z in its own nature. The reason for this, one would naturally assume, is that if F has x in its nature, then F cannot apprehend x . This is what the example of the eye seems to show: the eye must *lack* all color, in order to be able to perceive all colors. But this is not the explanation Aquinas gives. He instead argues that if F has x in its nature, then F cannot apprehend y and z , because F will be able to apprehend *only* x . This is how the example of the bitter tongue must be taken, unless one follows Norman Kretzmann's suggestion that Aquinas gets the example backward (1993, p. 151 n. 13). We should take the example as it is, however, because it fits with what Aquinas explicitly says: "that which exists in it naturally impedes its cognition of *other* things." Elsewhere, Aquinas is even more explicit:

Since our intellect is naturally suited to have intellectual cognition of all sensible and corporeal things, it must lack every corporeal nature, just as the sense of sight lacks color because it is capable of cognizing color. (If it had any color, that color would prevent *other* colors from being seen.) Just as a feverish patient's tongue that has a bitter humor cannot perceive a sweet taste, so if the intellect had any determinate nature, the nature that was natural to it would prevent it from having cognition of *other* natures (*InDA* III.7.139–50).

Having a determinate bodily nature would limit the intellect to cognizing only things of that nature.

Aquinas sometimes does seem to make the other claim: that for F to cognize x , F must not have x in its nature.

Everything that is in potentiality to something and is receptive of it lacks that to which it is in potentiality and of which it is receptive. For instance, the pupil of

the eye, which is in potentiality to colors and receptive of them, lacks all color (*InDA* III.7.131–36; see *InDA* II.23.225–66 and 91.1 ad 3).

This passage, which is only a few lines above the previous one, seems to imply that having a determinate bodily nature would block intellect from cognizing things of that nature. This would flatly contradict the conclusion of the last paragraph.

We can avoid a contradiction, however, if we take Aquinas to be saying something rather different. We should not understand him to be claiming that for F to cognize x , F must not have x in its nature. Instead, we should read him as claiming that if F cognizes x by having x in its nature, then F will be in a constant state of cognizing x . He suggests this reading of the argument in a passage that comes close after the last one:

If the intellect were capable of cognizing all things because it had all things in it, then it would always be actualized intellect, never potential intellect. Aristotle made the same remark earlier about the senses, that if they were composed of sense objects, then in order to sense they would not need external sense objects (*InDA* III.7.175–80).

The assumption of this passage is that a faculty cognizes an object by containing that object within itself. Thus, if the senses were composed of sense objects, they would always be cognizing those objects, and would not even need any external stimulus. So if F contains x , F will be constantly cognizing x . This alone would be problematic for intellect, because there clearly is no x that we are constantly thinking about. Moreover, if F is constantly cognizing x , then F will be blocked from cognizing other things. The case of the bitter tongue illustrates his argument. That tongue, because it cannot escape its bitter coating, is never rid of a bitter taste. Other tastes cannot get through. At this point Aquinas relies on the assumption that F cannot cognize more than one thing at a time. The claim seems questionable in some sensory cases: can't we hear more than one thing at a time? But 85.4 offers a plausible defense of this assumption in the intellect's case, and so here I simply grant the point.

Nevertheless, it is hard to find this argument for premise 2 compelling. Indeed, difficulties rush in from all sides. Does the tongue not have any flavor? Is no part of the eye colored? Why doesn't the tongue always taste itself, and the eye always see itself? As for intellect, even if it is incorporeal, does it not have some "determinate nature"? If so, won't it too be limited in what it cognizes? Indeed, won't it always be cognizing itself? Some of these questions can be answered. Premise 2 does not entail that no cognitive power can have any sort of determinate nature; it entails only that a cognitive power must be free of those sorts of things it is suited to cognize. The eye is not suited to perceive itself, and so needn't (absurdly) be free of its own nature. It need be free only of color. Likewise, the intellect is not suited to cognize itself directly (§11.1), and so its own nature does not block it from cognizing its proper object, the natures of bodies (see §10.1). But because it has for its proper object the natures of *all* bodies,

Not- ϕ

The argument of 75.2 has the same basic form as many such attempts to work out the nature of mind. There are two premises:

1. The mind is capable of x .
2. Nothing ϕ is capable of x .

Aquinas lets x be *cognizing the natures of all bodies* and lets ϕ be *bodily or using a bodily organ*. A more common form of argument lets x be *conscious experiences* and ϕ *material*. For most arguments of this basic form, the hard part is to establish the second premise. One famous attempt at this comes from Leibniz, who imagined a machine capable of perception that is large enough for us to walk around inside it, like a mill. In such a machine, “we will never find anything to explain a perception” (*Monadology* §17). Aquinas couldn’t accept this argument, however, because he believes that sensory perception is the activity of material organs (see §2.3).

A more exotic version of this same basic form replaces x with *grasping certain mathematical truths* and ϕ with *that works like a computer*. The argument for 2 then rests on Gödel’s proof of the incompleteness of arithmetic, reasoning that we can grasp the truth of certain mathematical statements that cannot be proved by any computational algorithm (see Lucas 1961; Penrose 1994, pp. 64–209; McCall 1999). But notice that, as I have described this argument, x subtly changes from one premise to the next. It is not clear that *grasping the truth* is the same as *proving* and, more important, not clear in what sense we do grasp the truth of these unprovable statements. See Searle (1997) for a clear and critical discussion of the argument.

it must be free from every bodily nature. Moreover, Aquinas suggests later that Premise 2 applies only in the case of material things:

matter limits the form of a thing to one particular. Thus it is clear that the nature of cognition is inversely correlated with the nature of materiality (84.2c; see also 86.2 ad 4).

Immateriality does not seem to limit cognition in the way that materiality does, and so the argument of 75.2 cannot be turned against the intellect itself.

Still, in the end, I do not see how to defend this argument. Its most basic difficulty stems from the way it treats cognizing x as a matter of becoming x . Aquinas regularly expresses his commitment to this analysis, as when he says that “something is cognized by someone in virtue of its somehow being within the one cognizing” (*QDV* 2.2c). On its face, this might seem rather bizarre. But Aquinas does not understand this analysis in a com-

pletely straightforward way. The object of cognition is “somehow” in the one cognizing, but that is not to say that the stone itself is really in the mind, that it is there *concretely*. Aquinas explains himself by saying that the form of the stone is in the mind, and exists there *intentionally*. “The senses and intellect receive the forms of things spiritually and immaterially, according to a certain intentional existence” (*InDSS* 18.208–10 [19.291]). By introducing this notion of intentional existence, Aquinas softens the above analysis. We now cannot reject this principle out of hand, as something obvious false and absurd, because we now need to know what he means by ‘intentional existence.’ And it could be, if Aquinas’s usage of ‘intentional existence’ is flexible enough, that we too could agree to adopt his manner of speaking, and say that when I think about a stone, the stone itself exists in my mind intentionally.¹⁰

This distinction between modes of existence exposes the weakness of premise 2. The argument is successful only insofar as it takes for granted a direct connection between intentional existence and concrete existence. Aquinas assumes, for instance, that if a certain color exists within intellect *concretely*, then other colors cannot at the same time exist within intellect *intentionally*. Evidently, he thinks this is so because he thinks that the concrete existence of x within F would entail the intentional existence of x within F , which in turn would preclude the intentional existence of y and z . This is why the pupil, if it is to be capable of seeing all colors, must lack all color. In the examples Aquinas considers, these inferences seem to hold true. The bitter coating on the tongue and the color of the vase block the proper intentional content. But we have no reason to think these examples generalize to all cases, especially where the mind is concerned. There is nothing here that forces us to conclude, for instance, that if the mind were just the gray matter of the brain, the mind would be incapable of thinking of anything other than gray matter. So although Aquinas softens his analysis by incorporating the notion of intentional existence, he at the same time insists on a direct link between intentional and concrete existence. It would be reasonable to follow Aquinas in thinking of cognition in terms of intentional existence, but I see no reason why we should accept a direct link between the intentional and the concrete. The argument of 75.2 takes this link for granted.

It is disappointing that at this crucial juncture there is not more to say on Aquinas’s behalf. But so far as I can see, there is not.¹¹

2.3. The sensory soul as a material form

Although the argument of 75.2 is disappointing, interesting questions remain about the status of the conclusion Aquinas reaches there. In saying that the human soul is subsistent, Aquinas means that the soul is a form that somehow surpasses matter, meaning that it can potentially exist apart from its matter – that is, apart from the body. This requires, as we have seen in §2.2, that the soul has an operation that transcends matter. It is not

at all obvious how to locate this kind of view within the context of recent philosophy. And in view of the dissatisfaction among many philosophers today with both dualism and materialism, it is worth investigating just what kind of relationship Aquinas postulates between mind and body. To clarify this issue, I will first look at the contrasting case of sensation, which does not transcend matter.

Aquinas believes that the souls of nonrational animals are not subsistent, a conclusion he establishes in the way we should now expect: by showing that their operations do not transcend matter. Strictly speaking, to show that animal souls are not subsistent, Aquinas would have to show that *all* animal operations require a body. (In this section I use the term 'animal' as shorthand for *nonrational animal*, and as a translation of Aquinas's talk of brute animals or beasts.) But he takes for granted, reasonably enough, that the only plausible candidate within animals for a non-bodily operation is the activity of sensation, and so the argument of 75.3 is confined to showing that sensation requires the body.

In reaching this conclusion, both here and elsewhere, Aquinas does not bother to distinguish between animal sensation and human sensation. He sees no fundamental difference between the two, writing,

The operation of the sensory capacity is carried out in the same way in a human being and an animal; for a human being sees through the eye in the same way (*eodem modo*) that a horse does (*QQ* 10.4.2c).

Aquinas does think that in some respects our sensory powers are "much finer, . . . as is evident in the cases of touch and the inner powers of apprehension" (*QDP* 3.11 ad 1), but these are not differences in kind. We have a softer skin than do animals, and consequently a finer sense of touch; also, we have more powerful internal senses. These internal senses, when combined with intellect, make a vast difference in how we use our senses, and even in our sensory experiences themselves: hearing a language you understand is very different from hearing one that is entirely foreign (see §9.2). But, contrary to what Descartes would later suppose, our sensory powers are not fundamentally different from those of animals.¹² Aquinas thinks that basically the same story holds for all sensory powers, human and animal alike: "with regard to sensible forms, there is no difference between a human being and other animals, because they receive a similar impression from external sensible qualities" (78.4c). Moreover, the only fundamental difference between the soul of a human being and the soul of a nonrational animal is that the former contains mind or intellect: "our soul differs from the soul of an animal only with regard to mind" (3a 5.4c).

This qualitative similarity between human sensation and animal sensation makes it easier to reach conclusions about how Aquinas conceives of sensation occurring in us. The fact that the sensory soul of an animal is not subsistent entails that the sensory part of the human soul is not subsistent,¹³ which means that its operations involve the body. (If this

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entailment did not hold then it would be absurd for Aquinas to insist on the fundamental similarity between human and animal sensation.) So by studying the way in which sensation involves the body, in both human beings and animals, we can understand the degree to which Aquinas accepts materialism with regard to human sensation. And this in turn sheds light on the sense in which Aquinas rejects materialism with regard to the human mind.

I believe that Aquinas takes sensation to be a wholly bodily process. In saying this I do not mean to deny that sensation involves the soul and, more generally, formal causes; what I mean is that sensation involves the soul and other forms in a way that a modern materialist could readily welcome. That is, Aquinas thinks of sensation as an operation consisting entirely of various bodily parts undergoing change in various ways. There is no further, nonbodily or spiritual operation involved. Aquinas is what I call a semimaterialist, in that he believes *some* intentional states, and *some* forms of conscious experience, can have explanations that are, in our modern sense, wholly physical. This is a controversial claim, but I believe that the textual evidence is decisive.¹⁴

When 75.3 argues for a corporeal element in sensation, it does so in a way that seems to fall far short of full-fledged materialism. All Aquinas seems to claim is that sensation has a bodily component:

... among soul's functions, only intellectual cognition is carried out without a corporeal organ. Sensation, on the other hand, and the resulting operations of the sensory soul, clearly do occur with some transformation to the body: in seeing, for instance, the pupil is transformed by the species of a color, and the same is evident in other cases (75.3c).

To say this much is not entirely trivial. For while it is obviously true that the eyes undergo bodily change, one might try to argue that what goes on in the eyes is merely preliminary to the operation of sight. One might suppose that sight, strictly speaking, is a nonbodily mental operation. This, clearly, is not Aquinas's view.

But does Aquinas believe that bodily changes are the only sorts of changes taking place? That is what I want to argue, but the claim may seem dubious. For starters, Aquinas elsewhere describes the reception of a species in the eye as a *spiritual* reception (78.3c), and he even says that "the alteration of sight is *solely* a spiritual alteration" (*InDA* II.14.280). But this shows much less than one might suppose. Aquinas thinks that a spiritual alteration occurs even in air and water. And as the above passage from 75.3 makes clear, the pupil's taking on the species of a color is for Aquinas a paradigmatic instance of a "transformation to the body."¹⁵ Sight, like all sensation, at least involves bodily change.

But there is obviously a difference between *involving* bodily change and *being* a bodily change, and 75.3 may seem to speak in favor of the former. Aquinas writes that "sensing, ... and the associated operations of the sensory soul, clearly do occur *with* some transformation to the body." The

italicized preposition (*cum*) suggests the presence of two parallel operations: one carried out by the body, the other by the soul.¹⁶ Other passages suggest a similar picture: "The act of the sensory power in an animal belongs to the sensory soul not on its own, but mediated by an organ" (*QQ* 10.4.2c). It is natural to read this last passage as claiming that the sensory organs are merely instruments through which the sensory soul engages in sensation. Those instruments may be necessary, but they play the role of mere conduits on the path toward genuine sensation.

Such interpretations, although natural, are not consistent even with the broader context of 75.3. Here is how the above passage immediately continues:

And so it is clear that the sensory soul does not have some special operation, on its own; rather, every operation of the sensory soul belongs to the compound. From this it follows that since the souls of brute animals do not carry out their operations on their own, they are not subsistent.

From the fact that sensing occurs *with* bodily change, Aquinas here infers that the sensory soul does not have an operation on its own. And from here it is a short step to the conclusion that animal souls are not subsistent (see §2.2). This passage shows that Aquinas does not take soul and body to be making separate contributions to sensation. If we could separate out some spiritual, soul-based component of sensation, then we would have to say that animal souls are subsistent. This very same line of thought occurs in *QQ* 10.4.2c (continuing the passage quoted in the last paragraph): "For if the sensory soul in an animal were to have an operation on its own, it would have subsistence on its own, and thus it would be imperishable." Again, the body is not merely a conduit for some further operation at the level of soul. The operation of sensation just is certain operations of the bodily sense organs.

At this point one might object in the following way. Although it is true that (a) the sensory soul does not have its own operation independently of the body, and that (b) the operation of sensation is a single operation performed by soul and body together, still the sensory soul must make its own nonbodily contribution to this operation, supplying some essential spiritual element.

There is a sense in which this objection is correct. The sensory soul actualizes the body, and an actuality is not a body (see §1.3). The sensory soul therefore makes a nonbodily contribution to the operation of sensation. But the parallel claim could be made equally well of all souls, and indeed all forms, even accidental forms such as heat. It is the very nature of forms in general that they are not themselves bodies. So if sensation is nonbodily only in this sense, it scarcely deserves being called spiritual, and we are not entitled to conclude that Aquinas has a nonmaterialist theory of sensation.

The objection I have imagined supposes that the sensory soul is making some kind of contribution to the activity of sensation that goes beyond

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what the sense organs can perform. The underlying motivation, perhaps, is that mere bodily stuff could never yield genuine sensory experiences. The soul, then, must provide something extra, something that transcends mere informed matter. But Aquinas explicitly says that when he speaks of one operation, he means to rule out a situation in which various agents are making separate contributions:

I speak of one operation, not as regards that at which the action is aimed, but in terms of what comes from the agent. For many men pulling a boat perform one action as regards that which they are acting on, which is one thing; nevertheless there are many actions as regards those pulling, because there are distinct efforts at pulling. For since action follows form and power, there must be different actions where there are different forms and powers (*SCG* II.57.1331).

Aquinas goes on to apply this analysis to sensory operations, which he says “are shared by the soul and the body.” This passage makes it clear that soul and body do not share in the activity of sensation in the way that two distinct agents cooperate in doing one thing. Sensation is not like many men pulling a boat; instead, the soul and the body together make up one agent, performing one activity.¹⁷

If I am right about Aquinas’s view, then we should expect to find him claiming that the distinction between the sensory soul and the sensory organs is conceptual rather than real – more like the difference between a triangle and its shape, and less like the difference between a chair and a person sitting on that chair. A real distinction between the two would require separate operations, since “things that are separate in being have separate operations” (*SCG* II.60.1385, and see 1331). Aquinas is not usually as explicit as I would like in discussing this issue, but there are passages in which his view emerges. He remarks, for instance, that if we were to regard the intellect in the same way that we regard animal souls, as a nonsubsistent, material form, then we might as well say that the intellect is a composite of form and matter. The difference between the two, he says, is merely verbal:

To say that the intellect is a nonsubsistent form, immersed in matter, is in reality [*secundum rem*] the same as to say that the intellect is composed of matter and form. The claims differ only in name. For in the first way the intellect will be called the composite’s *form*, whereas in the second way the intellect will be called the *composite*. Therefore if it is false that the intellect is composed of matter and form, it will be false that it is a nonsubsistent, material form (*SCG* II.51.1272).

This argument depends on the view that nonsubsistent forms are not something over and above the matter that they inform. We can draw a conceptual difference between the two, but there is no real distinction.

Aquinas makes a similar claim in his *De anima* commentary, here by way of interpreting Aristotle:

The sensory organ, along with the power itself (for example, the eye) “are the same” in subject, “but their being is different,” because the power differs from the

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organ conceptually (*ratione*). For the power serves as the organ's form (*InDA* II.24.85–89; see *SCG* II.57.1333).

Aristotle's words are: "they are the same, but their being [*esse; einai*] is different" (II 12, 424a25), words that obviously might lend themselves to a wide range of interpretations.¹⁸ Aquinas reads the passage as establishing a mere conceptual difference, a difference in how we define the two. One is form, the other a body. But there are not two things there. (I return to the distinction between form and matter in the *Excursus* to Part I.)

Still, is there not something about the process of sensation that goes beyond mere matter? After all, Aquinas regularly seems to dismiss mere bodily change as a cause of sensation:

There is another operation of the soul . . . which is brought about through a bodily organ, but not through any bodily quality. This is the operation of the *sensory soul*. For even if hot and cold, wet and dry, and other such bodily qualities are required for the operation of sense, still this is not in such a way that the sensory soul's operation gets carried out mediated by the power of such qualities; they are instead required only for the proper disposition of the organ (78.1c).

This is another passage that might tempt us toward analyzing sensation into two operations, one involving a sensory organ, the other involving the sensory soul. We have seen that this cannot be the correct interpretation of such passages: there can be only one operation, performed by a single agent. But isn't Aquinas telling us in the most definite terms here that sensation is not a bodily occurrence? Sensation, he says, occurs "not through any bodily quality."

This claim has to be understood in light of premodern science. By a bodily quality, Aquinas means one of the qualities associated with the four elements: earth, air, fire, and water. The basic qualities associated with these elements are hot and dry, wet and cold.¹⁹ If sensory cognition were a bodily process, then it seemingly would have to arise out of these four elements, mixed together in some proportion. But Aquinas is quite definite in denying that this is the case. Indeed, more generally, Aquinas denies that *any* of the operations associated with life can be accounted for entirely in terms of some mix of the four elements and their qualities. If such a theory were viable then we might identify the soul with some such bodily mixture. But Aquinas thinks that, even in the case of plant life, there must be some causal principle on the scene that transcends the four elements and their various qualities:

Some said that the soul is a harmony (as did Empedocles) or a complexion (as did Galen). . . . But this view is untenable, even as regards the nutritive soul, whose operations must have some principle that surpasses the passive and active qualities [of the elements]. . . . But complexion and harmony do not transcend the elemental qualities (*QDA* 1c).

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This conclusion holds a fortiori for the sensory and rational souls. Generally, then, “no soul is caused by a mixing together of the elements” (*De unitate* 1.788–89 [204]).

These antireductive claims extend even to some operations that are not associated with life, in particular to magnetism.

Some mixed bodies, in addition to the powers of the active and passive qualities which they possess because of matter, also have certain powers that depend on their species – e.g., magnets attracting iron. And this is found to be more the case in plants . . . and even more in animals, since sensing is entirely above the power of the elemental qualities, and most completely the case in the rational soul . . . (*SENT* 17.2.1 ad 2).

Once we see how far Aquinas wants to extend his antireductive claims, we should reconsider what the meaning of these claims are. If we focus only on what he says about the senses and intellect it is tempting to suppose that Aquinas is relying on our soul to provide the extra causal impetus, a spiritual ingredient which transcends our physical capacities. But should we extend such claims to plants? To magnets? This seems implausible.

If these elemental qualities are not responsible for the basic operations of life, then it is hard to see what else could be responsible, other than the soul itself, on its own.²⁰ But in fact Aquinas regularly tells us what is responsible: it is the *heavenly bodies*, he says, which are responsible for all life and all the operations of life. “Rays from the heavenly bodies transform all of lower nature” (*InDA* II.14.303–4). And elsewhere:

No one who is wise raises any doubt but that all the natural movements of the lower bodies are caused by the motion of a heavenly body. This has been proved through reason by the philosophers, it is clear through experience, and it is confirmed by the authority of the saints (*De 43 articulis* 3).

Such a heavenly influence is in particular the reason why some natural bodies are able to transcend corporeal qualities:

We find some forms at the lowest level that are capable only of operations to which the qualities extend that are dispositions of the matter: hot, cold, wet, and dry; refined, dense, heavy, and light, etc. Here we find the forms of the elements. These forms are entirely material, and completely immersed in matter.

Above these we find the forms of the mixed bodies. These, although they do not extend themselves to carrying out any operations that cannot be completed by the qualities just mentioned, nevertheless sometimes carry out those effects through a higher power, still corporeal,²¹ which they receive from the celestial bodies, and which depends on the species of these [bodies]. For example: a magnet’s attracting iron (*SCG* II.68.1455–56).

Still further removed from the capacities of the elements are the souls of plants, the souls of animals, and the souls of human beings. The

operations of both plants and animals are partially caused by the heavenly bodies: "Living things are generated by rays of the sun. . . . Nutrition and growth are caused through the power of solar light" (*InDDN* IV.3.312). Speaking of all the earthly bodies that fall in between the quite limited powers of the elements and the unlimited powers of the intellect, Aquinas writes:

In the case of these intermediary bodies *all* of their powers and actions that transcend the powers of the elements result from their own particular forms, and are traced back, as to a higher principle, to the powers of the heavenly bodies . . . (*De occultis* 235–38 [448]; see 115.3).

Notice first that all of these powers have the heavens as their higher principle, their higher cause. But notice, second, that these powers nevertheless "result from their own particular forms." We should not view the capacities for life as resting directly on a constant influx from the heavens. Rather, the heavens make it possible for plants and animals to have a soul that goes beyond mere heating and cooling. The heavens do this work at the outset, giving living creatures the capacity to transcend the elements. (See §4.1 for further details.)²²

The one exception to these general claims about the heavens' causal role is the rational soul. *De occultis* continues:

It is from such [celestial] principles that the forms of the lower bodies are derived – with the sole exception of the rational soul, which comes from an immaterial cause, God, in such a way that it is not at all caused by the power of the heavenly bodies. If it were so caused then it could not have an intellectual power and operation entirely free from matter (239–45 [448]).

The exception is a telling one. The rational soul is fundamentally different from other human powers, including the sensory soul, in that it alone is entirely immaterial. The other powers are part of the material world, and their explanations are material explanations. Aquinas infers from the rational soul's strict immateriality that it could not be derived from the heavenly bodies.

Aquinas is making an irreducibility argument of the sort that modern dualists often make. He thinks that phenomena like magnetism, nutrition, and sensation cannot be explained by earthly corporeal qualities, much like some now think that consciousness cannot be explained by neuroscience or computer algorithms (see **Not-φ**, p. 56). It must have seemed simply inconceivable that any combination of mere heating, cooling, and so on, could result in, say, sensation. But to say that sensation cannot be produced by the elemental qualities is not to say that there is some wholly incorporeal influence at work. The elemental qualities characterize only earthly matter: "the nature of a heavenly body is different from the nature of the four elements" (66.2c). When Aquinas denies that the elements are responsible for cognition he means to signal that celestial bodies are involved – not that the explanation is entirely incorporeal.

Heavenly bodies

When Aquinas writes that the powers and actions of bodies “are traced back, as to a higher principle, to the powers of the heavenly bodies,” he immediately goes on to add “and still higher, to the separate substances” (*De occultis* 238 [448]). He means that the angels are ultimately responsible for the movement of the heavens. The angels, or separate substances, govern the motions of the heavens. Even more, the angels are the “first principles” behind corporeal substances: “by means of the power and motion of the celestial bodies, they take the forms contained within their intellects and impress them on corporeal matter” (*De occultis* 162–64 [446]); see also *De 43 articulis* 3). Of course, the angels get their ideas from God, and so God remains the creator of all things. But, except in the case of intellectual substances, like the human soul (see §4.2), God does his work indirectly, through the angels and the heavens.

Once this further detail is supplied, can Aquinas still be called a materialist about sensation? Well, this is just one further respect in which, for Aquinas, no adequate scientific explanations can stop at the material, physical level. But Aquinas is as much a materialist regarding sensation as he is regarding other natural phenomena. The mind is special, but the senses are entirely mundane.

Not surprisingly, Aquinas never attempts to provide much detail about the nature of these heavenly bodies. He holds that they are free from contrary qualities (unlike earthly bodies), and therefore incorruptible, but we are told little more than that (see **Quintessence**, p. 137). One might justly complain that an explanation in terms of such mysterious agents is scarcely better than no explanation at all. (Nicole Oresme (d. 1382) would caustically remark, in the prologue to his *De causis mirabilium*, that “there is no need for recourse to the heavens, the last refuge of the weak.”) But Aquinas is proposing a materialist explanation, just as much as is a biologist who explains chlorophyll in terms of sunlight. We might say, about magnets, that they cannot be explained by chemistry, meaning (very roughly) that study of the periodic table and its governing principles will not explain how magnetism works. To understand magnets, instead, one needs to understand the branch of physics that concerns electromagnetic forces. Aquinas is saying something very similar. The obscurity of medieval cosmology does not show that Aquinas’s account of sensation is nonphysical.

2.4. Dualism

Aquinas looks like a dualist, even a substance dualist, inasmuch as he explicitly identifies the rational soul as a subsistent form and even as a

substance. Not surprisingly, many characterize him in just this way.²³ What should give us pause, however, is his willingness to make similar claims about the hand, the eye, and (by extension) the body's other organs. If the soul's subsistence makes Aquinas a dualist, then the hand's subsistence seems to give us a third substance, the eye's subsistence a fourth, and so on.

Could the soul be subsistent in some special way, above and beyond how the hand is subsistent? Certainly there are crucial differences. First, the hand is not an essential part of a human being; the rational soul is. Second, the rational soul, because it is a form, is incorporeal (75.1), which will be a crucial point in 75.6's main proof that the rational soul is imperishable (see §12.1); a hand, in contrast, is corporeal and perishable. Last and most important of all, for present purposes, a particular hand cannot remain in existence apart from its soul:

... just as one does not speak of an animal and a human being once the soul has left – unless equivocally, in the way we say that someone has painted or carved an animal – so too for the hand and eye, or flesh and bones (76.8c).

The soul is the substantial form that gives identity and existence to each part of a substance. Once the soul leaves, the body, and each of its parts, becomes something different: obviously it is no longer a human being, or an animal, but it is equally true to say that the body no longer has eyes, or hands, or flesh and bones. When Aquinas refers to the hand or the eye as subsistent, he does not mean the bodily part alone, but rather the bodily part as informed by the soul. Although we might refer to the eye of a corpse, we would be speaking equivocally. This is a consequence of the link Aquinas sees between existence and operation (§2.2): if something no longer operates as a hand, it no longer is a hand. I discuss this issue in detail in §§3.2 and 3.3. For now the important point is that such considerations don't apply to the soul itself, because it *is* the substantial form, and so there is no question of its being separated from itself. Hence the human soul is potentially separable from the rest of a human being in a way that no other part is.

So the human soul is separable from the body; the hand and various other bodily parts are not. But this shows nothing about the sense in which the two are subsistent: the Treatise stresses several times that the human soul is subsistent, and even a substance, in precisely the sense in which a hand is (75.2 ad 1–2; 75.4 ad 2). What failure of separability instead shows is that separability is a poor test for subsistence. A much better test, as §2.2 showed, is independence in operation.

Still, for a thing to subsist is for it to exist “on its own” (*per se*), and this strongly suggests that subsistent things should be comparably independent from other substances. If the human soul and the human hand turn out to be utterly different in this regard, it would be hard to defend the claim that they are equally subsistent (and so equally substances). Now I think that

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comparability can be established in this regard. To see that this is so, we have to imagine the possibility in general of a hand's existing all by itself. For although *my* hand cannot exist apart from my body, there is nothing incoherent in the possibility of *a* hand's coming into and remaining in existence apart from some further body. This is every bit as possible, I want to suggest, as a soul's existing apart from any body.

This may not be immediately clear. Hands as we know them must be attached to some further body. They are warm and soft, flesh-colored and functional because of their connection to other bodily organs. A heart must pump blood, an immune system must keep functioning, nerve and muscle must remain linked – and so on, in hundreds of other ways I know nothing about. The hand obviously does rely on other bodies for its continued existence.

The same is true, however, for everything else in the created world, even for complete substances such as human beings and fish. Fish cannot survive out of water. You and I cannot survive if there is not oxygen in the air we breathe, or if the air temperature is too high or too low. It might seem that the intellect is an exception here, since Aquinas insists so explicitly that the intellect operates on its own: that it “has an operation on its own which the body has no share in” (75.2c). But, in its current state, even our intellect is unable to operate without the help of the body. All intellectual cognition, he argues, requires the sensory images that he refers to as phantasms: “It is impossible for our intellect, in its present state of life . . . , actually to cognize anything without turning toward phantasms” (84.7c; see §§9.3 and 12.2). Just as a hand requires fresh oxygen, via the circulation of blood, so the human intellect requires a steady supply of sensory images. Without such images it would be unable to operate, and therefore unable to exist.

The claims of the last two paragraphs are couched in modal terms: in terms of what could or could not be the case. Those claims hold true only so long as we limit ourselves to thinking about situations where our hands, bodies, and intellects function according to the same physical and cognitive rules. If we change the rules, then we have to rethink the modal claims. So, for instance, it is possible (in some sense of possible) that I might be able to exist without oxygen, or at 300°F. Something would have to change for this to be possible – my body, the laws of nature, or something – but nevertheless there is a sense in which I could exist without oxygen. Likewise, it seems that in principle a hand could exist apart from a circulatory and nervous system. That is: a disembodied hand seems possible. What would be required, apparently, is that the hand be able to function as a hand. This does not mean that the hand must be able to direct itself around the room, or have desires and intentions. To be a disembodied hand, I suppose, the thing must be a living piece of flesh, and must be ready to carry out the various operations of a hand, when given the appropriate neural inputs.

Sine corpore

What would it be like for a human soul to exist and function on its own, independently of the body? Aquinas regards this as a central question for a Christian theologian to address, and his disputed questions *De anima* devote considerable attention to this issue (*QDA* 15, 17–21). I consider the issue in Chapter 12, in the context of life after death.

What would it be like for a human hand to exist and function independently of the body? Don't think of the old TV show *The Addams Family*. What creeps around that haunted house is not a hand, but an animal in the shape of a hand. Try imagining instead a future war where Army doctors carry around bags full of unattached body parts. When a soldier loses a hand, a new hand could be supplied from this bag of spare parts. These parts would count as genuine hands, without equivocation, if the flesh were somehow kept living and the muscles ready to respond to nerve impulses.

It is in this same extended sense that the human intellect *could* continue to function (and therefore exist) without the body. The difference is that Aquinas believes the human intellect actually will exist and function for a time apart from the body – even though that is “*impossible* . . . in its present state of life” (84.7c). Although Aquinas believes that our disembodied souls will eventually be reunited with our bodies (see §12.4), he thinks that there will be a period of time when our souls will exist (and therefore operate) without their bodies. This, again, would be impossible given the way our intellects currently work. But Aquinas is quite clear in holding that our cognitive capacities will change their *modus operandi*: “a separated soul uses its intellect just like the angels do, through species that it receives from the influence of the divine light” (89.3c; see §12.2).

When we think of what could be in the broadest sense, letting our thoughts encompass possibilities quite remote from our present circumstances, it turns out that the rational soul could exist without the body. But we might say the same thing about a hand, or an eye, or any other bodily organ. There is nothing special about the human soul in this regard. The one difference here is that Aquinas believes the human soul actually will exist and function without the body, thanks to a fundamental change in its cognitive capacities. That is an important difference, but it does not show that, as we exist now, our rational soul is any more of a substance than are our other parts. From the perspective of what could be the case, viewed broadly, the rational soul is on a par with the rest of us: the dualist's two-substance theory is no more defensible than a three-, four-, or five-substance theory. From this perspective, we are one complete substance composed of myriad incomplete substances.²⁴

2.4. DUALISM

Dualism looks no more coherent from a narrower perspective on what could be the case. If we hold constant the laws governing mind and body then no part of us can exist on its own – not even the whole person. From this narrower perspective on what could be the case, none of our parts can exist without the whole, and the whole cannot exist without the appropriate external environment. If the criterion for substancehood were independent existence in this sense, then we would be committed to the monism of a Parmenides or Spinoza, according to which a human being

Monism

Spinoza defines a substance as “what is in itself and is conceived through itself, that is, that whose concept does not require the concept of another thing, from which it must be formed” (*Ethics* pt.I d.3). This quickly leads him to the conclusion that there is only one substance, which he identifies with God. If Aquinas had accepted this definition of substance then he would have been forced into the same conclusion, because for Aquinas as much as for Spinoza nothing can exist independently of God:

It should be accepted without any doubt that things are conserved in their existence by God, and that they would be returned to nothing instantaneously if they were deserted by God (*QDP* 5.1c).

This shows just how much rests on the definitions. What looks radical, in Spinoza, is in large part just an eccentric use of terms. We can say that there is just one substance in the world, if we want to use the word ‘substance’ in that way, but nothing very interesting is at stake.

Aquinas wants to use the terms ‘subsistent’ and ‘substance’ to talk about individual creatures (see §3.2 for details). So although he shares Spinoza’s basic idea that substances are things that exist on their own, he has to be careful about how this is understood. Literally speaking, it is simply false that any individual creature can exist on its own. Aquinas acknowledges as much when he replies to one natural objection to his divine conservation doctrine. The objection (104.1 obj. 1) is that certain forms, angels and human souls, are subsistent and even imperishable. How then can their existence depend on anything else, even God? Aquinas indicates in reply that subsistence has to be watered down to account for God’s role: “a creature’s existing on its own is due to its form, but only if we presuppose God’s influence” (ad 1). Subsistence, and substancehood, involve something less than strict and complete independence.

is not even *one* complete substance, let alone two, but merely part of some one larger substance.

For a substance to exist on its own, then, is not for it to have complete causal independence. Subsistence must be understood in the specific terms Aquinas proposes: “we say that things subsist that have existence not in others, but in themselves” (29.2c; see Aristotle, *Cat.* 2, 1a24). The phrase ‘in others’ suggests the relationship of property to subject; more generally, it suggests that a thing lacks subsistence when its own existence is so bound up with another’s that it could not exist without that other thing. This sort of radical ontological dependence is fundamentally different from the causal dependence that we have been considering. An accident such as heat is radically incomplete: heat could never exist by itself – that is, it could never exist without being the heat of some particular body. Aquinas remarks that “strictly speaking, there is no way in which heat makes things hot” (75.2 ad 2), because what does not exist on its own cannot operate on its own. Barring a supernatural event of the sort that occurs in the Eucharist (see 3a 77.1, *QQ* 9.3.1 ad 2), heat could not exist without a subject. The same is true for color, and even for the souls of nonrational animals (75.3; §2.3).

Aquinas is clearly not a substance dualist – not if a substance dualist is someone who believes that human beings are composed of two and only two substances, the soul (or mind) and the body. But Aquinas shares with the substance dualist a key assumption, that the human soul is an incorporeal substance. And this may seem to amount to a kind of dualism: a commitment not to dual substances, exactly, but to dual properties, perhaps, or to dual kinds of entities.²⁵ In arguing for the human soul’s subsistence, Aquinas at times comes close to suggesting that the soul contains some kind of spiritual stuff – not spiritual matter (see *Materia spiritalis*, p. 42), but some kind of nonmaterial, ghostly entity. Aquinas writes, for instance, that

one kind of form is neither a soul nor a spirit, for instance the form of a stone; another kind is a soul but not a spirit, for instance the soul of an animal; another kind is a soul and a spirit, for instance a human being (*QDP* 6.6 sc 5).

Despite such passages, we should not suppose that Aquinas embraces a dualism of the sort just described. The passage is misleading, tempting us to introduce a fundamental ontological divide where Aquinas does not see one. The human soul is not spiritual because it possesses some kind of distinct stuff, stuff that animal souls lack. Nor, conversely, is the human soul free from some kind of stuff that animal souls possess.

I close this chapter, as I did the first, by pointing toward the deeper metaphysics suggested by Aquinas’s account. (For details, see the *Excursus* to Part I.) When Aquinas says that the human soul is a “spirit,” this should be read as shorthand for a more complicated analysis in terms of degrees of actuality. By analyzing all souls, indeed, all forms, in terms of actuality,

2.4. DUALISM

Aquinas highlights the continuity among kinds of being. The human soul is not different in kind from animal souls, but different in the extent of its power.

Among forms there are degrees of excellence: to the extent that a form is more excellent, so it is more dominant over matter. Thus the form of earth is more material than the form of air or fire. But among all forms the rational soul is more noble, and so it most of all is dominant over matter (II *SENT* 1.2.4 ad 4).

The human soul is spiritual just in this sense, that it has a power completely surpassing any sort of bodily activity.

... the human soul is a kind of form united to a body, but in such a way that it is not totally contained by the body and immersed in it, in the way that other material forms are. Instead it exceeds the capacity of all corporeal matter (*QDA* 2c).

The soul is so powerful, so actual, so close to divine, that it engages in an action on its own, independently of the body. This is all it means to say that the human soul is spiritual.

It is tempting to look for some further way in which the human soul is spiritual, some special stuff that the human soul has, and that mere bodies lack. This temptation fades away if one accepts the deeper metaphysical account I am advocating, according to which the only genuine reality in the world is actuality, and other things, even material things, are real only to the extent that they are actual. There is nonmaterial stuff in the mind – Aquinas calls it actuality – but he thinks that this actuality is spread throughout the created world. Some things, such as the senses, are higher on the scale of being because they have an operation that transcends the mere elements (see §2.3). Intellect is special because it transcends matter entirely: “To the extent that it surpasses the existence of corporeal matter, being able to subsist and operate on its own, the human soul is a spiritual substance” (*QDSC* 2c). Elsewhere, “the rational soul is an entirely spiritual form: neither depending on the body nor working with the body in its operation” (*QDP* 3.9c). What comes after the colon in this second passage explains what comes before it. For Aquinas there is no further question about whether the intellect has a spiritual nature. To be spiritual, in this sense, just is to have an operation that transcends matter.²⁶

So Aquinas is not a dualist, not even when dualism is understood along the lines of property dualism rather than substance dualism. Human beings are not the composite of two fundamentally different kinds of properties or entities. But of course Aquinas is not a materialist, either. He rejects materialism because he believes the rational soul is both incorporeal and subsistent. Its incorporeality alone is not inconsistent with materialism, because all forms are incorporeal (see §1.3). Its subsistence alone is not inconsistent with materialism, because anything with its own operation is weakly subsistent (§2.2). A modern materialist, for instance, might identify the soul with a certain brain structure or functional disposition. So defined, *the soul* would be incorporeal but nonsubsistent (inasmuch as

structures and dispositions exist in a subject), and *the mind* would be corporeal and subsistent (inasmuch as the mind would be a corporeal organ, the brain, actualized by soul). Aquinas would reject this form of materialism because he believes that the soul alone performs the functions of mind: the mind is a form, a subsistent form, and hence an incorporeal substance.

There can easily seem to be something ad hoc about this account of the rational soul. Aquinas wants the soul to be the body's form, and yet at the same time he wants it to be subsistent, to exist and to operate independently of the body. This looks at first glance like an ungainly compromise between philosophy and religion – as if Aquinas's unwillingness to abandon either Aristotelian hylomorphism or Christian dogma has forced him to combine views that simply will not mesh. How can the soul be related to the body as form to matter, and at the same time preserve its independence?²⁷

On my proposed reading, there is nothing incoherent or ad hoc in this account. Aquinas believes that the relationship between the human soul and the human body is fundamentally the same as all form-matter relationships. Soul actualizes body, with respect to both existence and the various operations of life. The only distinctive feature of this relationship in the human case is that the rational soul has an operation that surpasses matter, an operation that need not (and indeed cannot) be performed by the human body. This difference has the important consequence of making it possible (or so Aquinas believes) for the rational soul to survive when separated from the body. But the difference is not a deep metaphysical one. The human soul is a form just like other forms, and is different only in the extent of its operations. Moreover, because form or actuality is what is fundamental in nature, there is nothing peculiar or unnatural about a form's existing on its own, independently of matter: "for since matter has existence through form, and not vice versa, there is nothing to prevent some form from subsisting without matter, although matter cannot exist without form" (*QDSC* 1 ad 6).

Aquinas's hylomorphism aims to replace materialism with a more adequate metaphysics, while at the same time avoiding any sort of mind-body dualism. Far from being an embarrassment to this hylomorphic analysis, his conclusions about the rational soul's status are an immediate consequence of the analysis.

3

The unity of body and soul

Is there any principle in all of nature more mysterious than the union of soul with body: by which a supposed spiritual substance acquires such an influence over a material one, that the most refined thought is able to actuate the grossest matter?

Hume, *Enquiry Concerning the Human Understanding*, VII. 1

The longest article of the Treatise, 76.1, is devoted to accounting for the unity of soul and body. Much of the article works to establish the unworkability of accounts on which soul and body are two things that must somehow be tied together (§3.1). Aquinas's own solution is a form of Aristotelian hylomorphism that is meant to guarantee soul-body unity. To understand this special sort of unity, one has to understand Aquinas's general theory of substantial forms, which imposes strict constraints on what counts as a genuine substance (§3.2). The soul is a substantial form, on this account, because all the parts of the body have life and existence if and only if they are actualized by the soul (§3.3). But this unified account of soul and body by no means pushes Aquinas toward reductive materialism; instead, a proper understanding of form shows precisely why reductive materialism is false (§3.4).

3.1. The failure of nonreductive theories

After considering the soul in its own right (Q75), Aquinas turns to the relationship of soul and body. More specifically, he turns to “the soul’s *union* with the body” (76pr). To say that soul and body are united (*unitur*) is simply to say that they make one (*unum*) thing. The first article of Q76 focuses on how this union is accomplished, taking for granted that soul and body do in fact make one thing. For several reasons, it is not surprising that Aquinas would take this much for granted. First, a human being certainly seems to be one thing, and Aquinas identifies a human being with the conjunction of soul and body (§2.1). Second, a substance would seem to be a paradigmatic instance of a single, unified thing, and Aquinas holds that human beings count as complete substances, whereas their parts do not (§2.2).

3. THE UNITY OF BODY AND SOUL

On the other hand, there are numerous respects in which Q75 has made it more difficult, and less plausible, to hold that soul and body make one thing. The six objections of 76.1 serve to remind the reader of these difficulties. First (obj. 1, 4, 5), Aquinas holds that the intellect operates without the body, and that therefore it has existence on its own, independent of the body (see §2.2). Such independence in operation and existence makes it difficult to see how soul and body could constitute one thing. Also (obj. 2, 3), Aquinas believes that materiality is incompatible with intellectual cognition (§2.2). It would seem, then, that the unity of body and soul would preclude intellect's activity. Finally (obj. 6), Aquinas holds that the soul is imperishable, whereas the body is not (75.6). But when one thing can exist independently of another, it seems difficult to hold that those two things are in fact one, unified thing.

The difficulty of Aquinas's position becomes even more evident when we reflect on the sort of unity that he wants to ascribe to soul and body. The conclusion he wants is that "the intellective principle is united to the body as its form" (76.1c). Yet when one thinks about the nature of this hylomorphic relationship, it is hard to see how Aquinas will be able to reach such a conclusion, especially in light of Q75. Aristotle had remarked that "it is not necessary to ask whether the soul and its body are one, just as we do not ask about wax and its shape . . ." (*De an.* II 1, 412b6–7). But clearly the wax and its shape will not be a workable model for Aquinas. The shape of the wax is far too dependent on that wax: it could not, for example, exist without the thing it gives shape to. So if Aquinas is to explain the unity of soul and body in hylomorphic terms, he will have to say quite a lot about how this relationship is to be understood. *Prima facie*, such an account seems poorly suited to his needs.

Among Aquinas's contemporaries, despite the pervasively Aristotelian atmosphere, there were those who doubted that the rational soul could be explained as the form of the body. Even Albert the Great, who was not just Aquinas's teacher but also a leader in the Aristotelian movement, wrote that the soul "is better spoken of as an actuality or perfection, rather than a form. . . . A form, strictly speaking, according to natural philosophy, is that which has existence in matter and does not exist without it" (*Summa de homine* 1.4.1 ad 6). Aquinas clearly has such worries in mind. He begins the long reply to 76.1 by recounting Aristotle's extended argument from *De anima* II 2. But immediately after reciting this argument, Aquinas begins anew, in his own way, as if acknowledging that Aristotle's reasoning has not proved completely convincing to everyone.

If someone wants to say that the intellective soul is *not* the form of the body, then it is incumbent on that person to find a way in which the action of intellectually cognizing is the action of a particular human being. For each one of us experiences that it is oneself who intellectually cognizes (76.1c).

Aquinas issues a challenge: If the intellective soul is not the form of the body, then some other account needs to be given of what makes an episode

3.1. THE FAILURE OF NONREDUCTIVE THEORIES

of intellectual cognition *mine* or *yours*. An account needs to be given, in short, of what unites each of us with our intellects. The leading premise here is that each one of us does engage in intellectual cognition. Each of us “experiences” that such cognition is something we do. In the *De anima* commentary he writes,

it is clear that an individual human being has intellectual cognition. If *that* is denied, then the person maintaining this view has no intellectual cognition of anything and is not to be listened to (*InDA* III.7.281–84).

The tone of the second sentence is derisive, but it makes a serious point. No one who did not engage in intellectual cognition would be worth listening to – such a “person” could not even participate in the discussion.

What makes it the case that my intellectual activity really is *my* activity? That is, what makes it the case that my intellect really is *mine*? The most straightforward answer to these questions is Plato’s: “a human being *is* the intellectual soul” (76.1c). Aquinas has already rejected that possibility, in 75.4. Because I engage in sensation, and sensation requires the body, the body must be a part of me (see §2.1). Conversely, because I engage in intellectual cognition, and yet am not identical with my intellect, my intellect must be part of me; this is the only plausible way in which *I* could engage in intellectual cognition. So I have a bodily part and an intellectual part; to speak of them as parts of me entails that they are somehow unified, coming together as parts of a single thing, me:

We can conclude, therefore, that the intellect by which Socrates cognizes is a part of Socrates, and consequently the intellect is somehow united to Socrates’ body (76.1c).

The problem of Q76 is to explain how intellect, and by extension the whole soul, is united to body. Aquinas believes not just that the form-matter relationship offers the *best* explanation of this unity, but that it offers the *only* workable explanation. The challenge he extends, then, is not to show that his Aristotelian account is wrong, but to offer a coherent alternative.

In 76.1, Aquinas focuses exclusively on those alternatives that would unify soul and body without entirely reducing them to one single thing. Standardly, such accounts are motivated by the background assumption of substance dualism. But Aquinas has in mind other possibilities as well, above all, the various forms of monopsychism that were influential in his day. Monopsychism is the thesis that human beings share a single intellect. Although incredible sounding, such claims were in effect an alternative formulation of the thesis of divine illumination, a view which was taken very seriously by thirteenth-century Christians (see §10.2). Monopsychism had its defenders in the Latin West, but was associated above all with Islamic philosophy: Averroes was taken to have held that human beings share a single possible intellect; he and Avicenna defended the view that human beings share a single agent intellect.

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The goal of 76.1 is not to refute any of these theories directly. (See §2.4 for why Aquinas would reject substance dualism. He attacks different versions of monopsychism in 76.2 and 79.5; see **Separable, unmixed**, p. 162.) The goal is rather an indirect refutation, by way of establishing that no such nonreductive theory can account for the unity of soul and body. Regardless of whether the background theory is substance dualism, monopsychism, or something else, the nonreductivist will have to tell some kind of story about what it is that unifies soul and body. Some such accounts are so obviously unsatisfactory that Aquinas doesn't bother to mention them. One might, for instance, try to explain soul-body unity by the fact that soul and body are spatially connected (with one containing the other, or the two being contiguous). This will not work. If such local connections were sufficient for unity, then a fetus inside a woman would count as a part of her, and together they would make up a single living substance.

The focus of 76.1 is on the two leading medieval candidates to unify soul and body from within a nonreductive framework. These proposals are on the surface more plausible, but in the end they are no more successful. Each proposes to explain the unity of soul and body in terms of causal interrelations. The first account, attributed to Averroes, proposes uniting soul and body by a causal connection running from the body to the intellect. On this account the body and the soul are united in virtue of the fact that they share information about the world, in the form of phantasms.

The Commentator . . . says that this union takes place through intelligible species. These species have two subjects, one the possible intellect, the other the phantasms that exist in corporeal organs. In this way, then, the possible intellect is connected to the body of one or another human being through an intelligible species (76.1c).

This proposal can seem obscure and ill-motivated, particularly when understood in the context of Averroistic monopsychism. But despite its suspect origins, the underlying idea is a natural one. Surely it is reasonable to propose that body and intellect are a unified whole because intellect makes use of the body as a means of acquiring information. A hermit crab, in contrast, has no such connection with the shell that it takes up as its home. The shell protects the crab, but is not a conduit for information about the world. Thus we do not think of the shell as being part of the crab.

Despite the superficial plausibility of this proposal, Aquinas argues that such a causal connection is nowhere near sufficient. We might just as well say we are united with a wall, Aquinas remarks, since visual information passes from the wall into our eyes just as much as it passes from our eyes to our intellect.

It is evident that we do not attribute the action of sight to a wall, just because that wall has the colors whose likenesses are in sight. For we do not say that the wall *sees*, but rather that it is *seen*. Therefore just because the species of phantasms are

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in the possible intellect, it does not follow that Socrates (in whom the phantasms exist) intellectually *cognizes*, but that he, or his phantasms, are intellectually *cognized* (76.1c).

Socrates's phantasms pass from his body to his intellect, but we could say much the same about the colors that pass from the wall to Socrates's eyes. So this sort of causal connection does nothing to unify soul and body. At most it would show that the intellect cognizes the body, when in fact what is wanted is an account of how the intellect's cognitive activity could be the activity of the whole person.

The second alternative that Aquinas considers appeals to causality in the opposite direction.

Now some want to say that the intellect is united to the body as its mover, with the result that from intellect and body one thing comes about, so that the action of intellect can be attributed to the whole (76.1c).

On this proposal soul and body would be one thing because the soul moves the body; here 'move' should be understood quite broadly, so that it covers all kinds of causal impressions on the body. Again there is something attractive about this explanation of how soul and body are connected. At least part of our motivation for thinking of soul and body as unified does seem to be that the soul controls (parts of) the body. This was Plato's view of the soul-body relationship, or so Aquinas reports in 76.3c. This also seems to be a fair description of how some of Aquinas's contemporaries viewed the soul-body relationship. William of Auvergne (c. 1180–1249), for instance, held that the soul's presence in the body is required so as better to command and move the body (*De anima* IV 35, 194–95; I 7, 72–73).

It seems evident that this sort of causal connection is not sufficient: the hermit crab moves its shell, even though that shell is no part of it. But it might at least seem that this account could supplement the first proposal, so that causal connections in both directions would account for the unity of soul and body. The wall is not part of me, because I exert no control over that wall's movements. Even this joint account is not quite adequate, since I *could* move that wall if I went to sufficient trouble. But perhaps we could refine the account so as to rule out such occasional causal interactions. We might, first, specify that the mover-moved relationship be ongoing. If that were not enough, then we might add that the causal relationship be of a certain direct and unmediated kind.

Yet even if these vague suggestions were developed, Aquinas would remain dissatisfied. At the most, he believes, the mover-moved relationship would establish for human beings the kind of unity that exists between me and my clothes (*SCG* II.57.1335). This seems right. No causal connection of the sort Aquinas considers seems able to explain why my body is a part of me but gloves, for example, would not be. The fundamental difficulty with the mover-moved account, then, is that it does not produce genuine, unqualified unity. This seems so self-evident to

Platonism

When we rank the greatest philosophers of all time, the ancients get extra credit for having gone so far with so little help from their predecessors. How did Aristotle do it, with little more than Plato to guide him? How did Plato do it, almost from scratch? Obviously, medieval philosophers had more resources to draw upon. Still, we should marvel at how Aquinas managed to go so far with virtually no first-hand knowledge of Plato. And we can wonder just how much better he might have been, if he had known Plato's work at first hand.

In describing Plato's theory of soul, Aquinas is relying on *De natura hominis*, a work he believed to have been written by Gregory of Nyssa, but which was in fact written by the fourth-century Syrian Christian Nemesius of Emesa. Aquinas often acknowledges his dependence on this work for information about Plato (see, e.g., II *SENT* 1.2.4 ad 3).

Although Nemesius does not attribute to Plato specifically a mover-moved account of the soul-body relationship, he describes the account in a way that suggests as much:

Therefore Plato . . . did not hold that an animal is made up of soul and body, but that it is the soul using the body and (as it were) wearing the body. But this claim raises a problem: How can the soul be one with what it wears? For a shirt is not one with the person wearing it (*De natura hominis* ch. 3, pp. 51–52; see ch. 1, p. 5).

Is this Plato's view? The phrase 'soul using a body' is found at *Alcibiades* 129e, but it is not clear whether this dialogue was written by Plato. To make matters still worse, Nemesius himself does not seem to have had much direct knowledge of Plato's works. Still, fairness to Plato aside, the passage illustrates exactly what Aquinas takes to be wrong with Plato's view.

Aquinas that he simply announces, without argument, that on the mover-moved account "it follows that Socrates is not one thing absolutely [*unum simpliciter*]" (76.1c). Although 76.1 considers four different lines of argument against the mover-moved account, this lack of real unity is his fundamental complaint.

The notion of being *unum simpliciter* is central to Aquinas's thinking about human nature. To be *unum simpliciter* is contrasted with being one thing in some respect (*unum secundum quid*). Aquinas cites with approval a remark by Pseudo-Dionysius that any given group of things is one in some respect or other; Aquinas imposes strict criteria, however, on what can be *unum simpliciter*. First, merely being assembled or even joined together is not enough. This rules out, for instance, a pile of stones, and

3.2. THE UNITY OF SUBSTANCES

shows why mere spatial continuity does not make soul and body *unum simpliciter*. Second, it is also not enough to be assembled in some functional order. Aquinas denies that a house is *unum simpliciter*, for instance; it is one merely “by aggregation or composition” (*QDA* 10c).¹ Third, and most relevant for present purposes, being united as cause and effect does not make two things *unum simpliciter*. So, even if there is a sense in which soul and body are united by causal contact (see 75.1 ad 3), “things united by such contact are not *unum simpliciter*” (*SCG* II.57.1319).

Nonreductive attempts to unify soul and body will at best produce unity *secundum quid*. That in itself might not be a devastating objection: after all, the very point of nonreductive accounts is to insist that in a sense human beings are two things, not one. But Aquinas thinks that the failure to make human beings *unum simpliciter* has devastating consequences. The principle he relies on here and repeatedly restates is that “something is a being [*ens*] in just the way that it is one” (76.1c; see 76.3, 76.7). The intuitive idea is this. Not every gerrymandered compilation of things counts as a being. A forest or an army, for instance, is a being only in an attenuated sense, corresponding to the attenuated sense in which these collections can be considered one thing. Collections with even less of a claim to be one thing (the water from the lakes of all the states with Republican governors) can be considered a being even less. It is things that are *unum simpliciter* – an individual tree in a forest, an individual soldier in an army – that are beings in the fullest sense. Only beings of this sort are placed in a genus and species, are complete substances, and have actions attributed to them.² The *De unitate intellectus* spells this out in more detail:

If you say that Socrates is not one thing *simpliciter*, but one thing in virtue of combining mover and moved, then many absurdities follow. First, since all things are one in the same way that they are a being, it follows that Socrates is not a being, and that he is not in a species or genus, and further, that he does not have any action, since an action belongs only to a being (3.148–55 [223]).

This last implication returns us to the commonsense premise on which 76.1 is based: “Each one of us experiences that it is oneself who intellectually cognizes.” When something is not *unum simpliciter*, we tend to attribute its actions to a part of it, rather than to the whole. We attribute an action to an individual soldier, for instance, or to a platoon, rather than to the whole army – unless the whole army (or at least a substantial part) took part in the action (*InNE* I.1.78–95 [5]). We can conclude, therefore, that if Socrates were not *unum simpliciter*, it would be misleading at best to say that he intellectually cognizes. What would be more accurate is to say that some part of him, his intellect, is what intellectually cognizes: in that case, however, “intellect’s action cannot be attributed to Socrates” (76.1c).

3.2. The unity of substances

Aquinas takes the argument of §3.1 to rule out all the available non-Aristotelian options. He concludes,

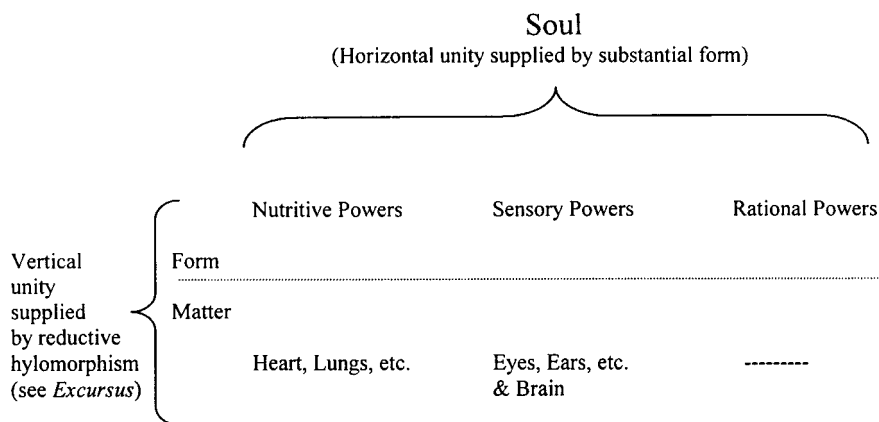
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The only way that is left, then, is the way that Aristotle proposes: that this particular human being intellectually cognizes because the intellectual principle is that person's form (76.1c).

As is often the case in the Treatise, this conclusion is something of an oversimplification, an inevitable result of *ST*'s ambition to be "concise and lucid" (1a pr; see §In.2). Aquinas may have refuted some nonreductive theories, but he has not shown that the only theory left is hylomorphism. In particular, Aquinas has said nothing about another reductive strategy, reductive materialism. The expectation that he ought to consider this topic is not anachronistic; Aquinas knows (see §1.2) that some ancient naturalists, rather than crudely eliminating the soul, considered theories on which the soul is a material property of the body. We will see in §3.5 how Aquinas would reply to that sort of account.

Because he insists on the unity of soul and body, Aquinas commits himself to an account that is, in a very broad sense, reductive. The argument of §3.1 ruled out only some very implausible and extreme nonreductive theories: views on which the human intellect is a separate substance, and some (but perhaps not all) types of substance dualism. I now want to consider Aquinas's positive account of what unifies soul and body. In the *Excursus* to Part I, I suggest that Aquinas's account of form and matter is reductive – meaning, roughly, that form and matter are not really distinct components of material beings. This gives composite substances a kind of vertical unity. Here I want to consider how substances have a kind of horizontal unity among their various parts, in virtue of being actualized by a single substantial form. It is this kind of unity, in the terms of the previous section, that makes substances *unum simpliciter*.

It might seem as if the best points of entry into Aquinas's thinking about the unity of soul and body are the sorts of examples that Aristotle offers:



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for example, the wax and its impression (*De an.* II 1, 412b6–7); the bronze of a statue and its shape (*Met.* VII 3, 1029a4–5); the material of an axe and its capacity to cut (*De an.* II 1, 412b11–413a2). In fact, Aquinas believes that these are all misleading examples, because they all concern artifacts rather than genuine substances. With regard to the bronze statue, he remarks,

[Aristotle] exemplifies this division through artifacts, in which the bronze is like the matter, the shape like “the form of the species” (i.e., it supplies the species) and the statue composed of these. Yet this example must certainly not be taken as a true instance of the relationship, but as a likeness, because shape and other artificial forms are accidents of various sorts, not substances. Still, in the case of artifacts the shape is related to the bronze much as the substantial form is related to the matter in the case of natural things. It is to that end that he uses this example, explaining the obscure through what is clear (*InMet* VII.2.1277).

Artifacts are convenient illustrations of the hylomorphic theory of substance. It is easy to distinguish the shape of a statue from the bronze stuff out of which the statue is made, and Aristotle wants to use this clear case as an analogy for less obvious ones. But the example is merely analogous, Aquinas emphasizes, because a statue, qua statue, is an artifact, not a substance, and accordingly the shape of a statue is an accidental form, not a substantial one.

Despite the routine way in which Aristotle uses artifacts as examples, this point of disanalogy makes an enormous difference for Aquinas. To compare artifacts with natural substances is to mix things that have very different claims to being substances:

Natural bodies are substances more than artificial ones are, because natural bodies are substances not only with respect to their matter, but also with respect to their form (*InDA* II.1.157–58).

Aquinas does not absolutely deny that the statue is a substance, because the statue is composed of bronze and bronze is a substance (see below). Artificial bodies, then, are substances “with respect to their matter.” But “with respect to their form” (qua form, to use the Latin expression more familiar to us than to Aquinas), the statue is not a substance, inasmuch as shape is an accidental form. In turn, because artifacts are not substances, they lack the unity that human beings and other natural substances have.

Anything that is one in terms of substance is one thing *simpliciter*. . . . A thing that is discrete [*diversa*] in terms of substance and one accidentally is discrete *simpliciter* and one in some respect [*secundum quid*] (1a2ae 17.4c).

Artifacts are not entirely satisfactory, then, as a guide to Aquinas’s thinking about the unity of soul and body. They are, in particular, poorly suited to explain the kind of unity that Aquinas associates with substances, the unity involved in being *unum simpliciter* (see §3.1).

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Unfortunately, the last two paragraphs raise as many questions as they answer. If we are to understand Aquinas's position, it now seems, we will need to consider

- (i) the difference between natural beings and artifacts;
- (ii) the difference between substantial and accidental forms;
- (iii) the reason why a substantial form has a special kind of unity with its matter, beyond the sort of unity an accidental form has with its subject.

Although (i) is an interesting question in its own right, I am going to pass it over in favor of the other two questions.³ Regarding (ii), we might initially say that a substantial form is a form in virtue of which a thing is the substance it is. And since "it is . . . impossible for something to be intermediary between substance and accident" (76.4 ad 4), we can say that all other forms are accidents. Here 'substance' means a complete substance, and a complete substance is that which "has the complete nature of some species" (75.2 ad 1; see §2.2). *Bronze* is a substantial form, then, because that form specifies the species of the object – the object's essence – whereas the statue's shape is accidental. Likewise, *human* is a substantial form whereas *pale* and *musical* are accidental, because there is a human species, but no species of pale things. This gives us a rather thin account, however, because it presupposes a substantive and problematic distinction between species and nonspecies. Pursuing this line of thought would lead us to take up Aquinas's views about natural kinds, and why it gets us closer to the essence of things to classify in terms of *human* and *bronze* rather than *pale* and *human-shaped*.⁴ Rather than move in that direction, I propose to see whether we can find another way of distinguishing substantial and accidental forms, independently of any determinations about natural kinds.

Often enough, Aquinas does propose another way of making this distinction. Substantial forms make a thing exist, he says, whereas accidental forms make a thing be such:

A substantial form differs from an accidental form in this respect: that an accidental form does not make a thing be *simpliciter*, but makes it be such. It is in this way that heat makes its subject not be *simpliciter*, but be hot. . . . A substantial form, on the other hand, gives existence *simpliciter* (76.4c).

This is how Aquinas defines substantial and accidental forms, and this definition is best understood in terms of examples. When copper and tin are fused into an alloy, something new comes about: bronze. The new substantial form, of bronze, makes something be. Because the tin and the copper cease to exist, we do not think of bronze as a modification of something else, but rather as something new coming into existence. In contrast, when that bronze is cast into a particular shape, nothing entirely new comes about. The bronze remains, merely taking on a new shape. That accidental form, the shape, makes the bronze be such. The same is true for body and soul. The human soul does not modify something that already exists,

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but brings a human being into existence. Before soul and body are joined, there is one thing (a fetus). Once they are joined, something new comes into existence, a human being. The old thing (the fetus) ceases to exist (see §4.3).

This definition makes a fairly standard suggestion about how to distinguish substantial from accidental forms or properties: a substantial property is that which makes a thing be what it is, and without which that thing could not exist.⁵ Accidents are properties that a thing could do without, and that may come and go while the substance remains. But this, too, is a rather thin account of substance, because it presupposes that we have a clear grasp of when we should claim that a thing has gone out of existence and when we should claim that it has merely changed. Also, it gives no further aid in analyzing what impels us to make such claims. (Why do we say that bronze is something new? Why do we say that the statue is not something new, but just the bronze with such a shape?) Moreover, the proposal does little to explain (iii): why substantial forms should have a special kind of unity with their matter. The definition of 76.4c, then, offers little more than a glorified appeal to our intuitions, cloaked in theoretical terms.

Aquinas has something better to offer us, however. Whereas 76.4c offers a formal and rather unhelpful definition, 76.8c gives us a more meaningful analysis:

A substantial form perfects not only the whole, but each part. For since the whole is made up of its parts, a form of the whole that does not give existence to the individual parts of the body is a form that is a composition and ordering (the form of a house, for example), and such a form is accidental. The soul, on the other hand, is a substantial form, and so it must be the form and actuality not only of the whole, but of each part.

This passage makes something more meaningful out of 76.4c by extending its scope. The criterion, we are now told, needs to be applied not only to the whole object, but to each part of the whole. This makes an enormous difference. If we ask whether something new comes into existence when we give bronze a shape or build a house out of wood and stone, it is not at all obvious how we should answer. Perhaps our intuitions point toward a negative reply, but here it is hard to distinguish intuitions from the force of habit, and it is tempting to think that our intuitions could stand being overhauled, if not revised wholesale, by a vigorous and thorough metaphysical analysis.

Aquinas proposes asking not only about the whole, but about each of the parts. When we cast a statue, or build a house, have we given existence to each of the individual parts? That is to say, does changing the shape of the bronze, or making walls out of bricks, make something new out of each of the parts? To these questions we can give a more confident negative reply. The individual parts of the bronze have been heated, molded, and cooled, but otherwise remain unchanged. The bricks and wood of the house have

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likewise been repositioned, but remain bricks and wood. So on this *extended criterion* (as I call it), neither house nor statue involves the imposition of a substantial form. Each provides merely “a composition and ordering.”

One might attempt to resist this conclusion by charging that it rests on implicit and dubious assumptions about essences. If we think of the parts of the bronze statue as bronze, then certainly they remain after the statue has been destroyed. But what if we think of them as statue parts rather than as bronze? Similarly, the parts of the house remain once the house is destroyed, if we think of those parts as bricks and wood. But what if we think of them as house parts? The bricks remain, when the house has been torn down, but the chimney does not remain, and consequently neither do any of the chimney parts. We might say that this pile of bricks once was the chimney, but we cannot say that it is the chimney. And, since there is no chimney, we cannot say of any brick that it is part of the chimney. Characterized as a brick, then, it still exists. But characterized as a chimney part, it has ceased to exist. And what reason do we have for thinking that the first characterization is somehow closer to the real metaphysical truth?

The reply just made will seem successful only when the extended criterion is extended halfway. If we look only as far as chimneys and fireplaces, it may seem as if the parts go out of existence when the house does. Arguably, there can be no fireplace if the surrounding house has been torn down. To be a fireplace, we might say, requires being able to play a certain functional role. This case becomes harder to make if we descend to the level of the individual bricks, although perhaps here too we can think of the bricks as having a function. The case verges on the absurd, however, once we descend even farther, to ask about the constituent parts of each brick. Have the bits of clay that make up the brick changed in any way? Is there anything that would lead us to say that they have become something new, or changed their identity? At this level it seems absurd to appeal to function, as if the bits of clay become something different once they cease to be parts of a chimney. Aquinas’s extended criterion derives its strength from the way it forces us to focus our attention on *all* parts of the substance-candidate. The criterion must be extended all the way down. As with any therapy, to stop the treatment halfway is to invite a relapse.

What about bronze? I have been assuming that what starts out as copper and tin becomes something new, not just as a whole but in each of its parts. This itself is an assumption that needs some defense (see **Molecules**, below). But there is a related question that needs addressing first: Is the whole lump of bronze a single substance, *unum simpliciter*, or is a lump of bronze more like a forest, a conglomeration of many substances? These questions have been obscured until now because the mass term ‘bronze’ is indeterminate among a single molecule, a larger lump, or even all the bronze in the world. Here too, however, the extended criterion supplies

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answers. A lump of bronze cannot be a substance, on this criterion, because the parts of that lump remain in existence even once the lump has been divided. Just as the bricks of a house remain bricks after the house has been destroyed, so, too, the individual molecules remain bronze after the lump has broken apart. If a piece of bronze counts as a substance, it will do so only at the microlevel: at the point at which that piece cannot be broken apart and still have bronze parts left over.⁶

As it turns out, then, the example of a bronze statue is doubly unsuitable for Aquinas as an example of the hylomorphic relationship. Not only is *statue* not a substantial form, but, moreover, the thing modified in an accidental way by *statue*, the lump of bronze, is not a substance at all, but a conglomeration more like a forest than like a proper substance. Generally, Aquinas's extended criterion seems to have the surprising implication that nonliving substances occur only at the microlevel. Anything larger is a mere aggregate.⁷

I turn in the next section to the case of living substances, and the unity of soul and body. But first we should dwell on the case of nonliving substances, and consider whether the extended criterion's surprising implications are consistent with Aquinas's overall ontology. My reading of Aquinas on this point is a controversial one; I am drawing conclusions about his metaphysics that go beyond what the texts explicitly say. One might suppose that, contrary to my view, it should be easy to find places where Aquinas characterizes nonliving mid-sized aggregates as substances. Yet the only passages of this sort I have been able to find are occasional offhand remarks that seem to bear little theoretical weight.⁸ Moreover, his views about chemical structure are congenial to the extended criterion in several respects. First, he believes that bodies are not infinitely divisible.

Although a body considered mathematically is infinitely divisible, a natural body is not infinitely divisible. For . . . in a natural body one finds a natural form, which requires a determinate quantity just as it requires other accidents (*InPh* I.9.66).

A natural body must be of a certain size, neither too large nor too small: if it goes beyond those limits, it will lose its form. Aquinas defines the *minimum* of a natural body as a body that "cannot be divided further without its being corrupted and then dissolved into the body containing it" (*InDSS* 17.200–3 [18.279]; see 14.221–26 [15.220]). Elsewhere he explains that water cannot be infinitely divided into more and more rarified parts: "the water could be so rarified that at that point it would not be water, but air or fire" (*QDP* 4.1 ad 5). So taking elemental water as our example, and applying the extended criterion, we can say that a body of water counts as a single substance if and only if it is not divisible into two discrete bodies of water – that is, if and only if there is not enough water there to constitute two (or more) *minima*. This does not mean that only the *minimum* of such a body counts as a substance. There might be the

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minimum, and a bit more besides. But if that further bit can be separated and can form a *minimum* of water on its own, then that body of water was not a single substance, but an aggregate of several substances. This is what 76.8c implies, in saying that “a substantial form perfects not only the whole, but each part. . . .”

Of course it is not Aquinas’s view that the only substances are the basic elements. Even among nonliving things, the basic elements can be combined to form complex substances, much in the way that modern chemistry tells us that elements can bond to form molecules or mix to form alloys. The difference between a mere aggregate and a complex substance is that the parts of the latter will lose properties they possess in isolation and take on new properties characteristic of the complex. Thus, “the form of a mixed body has an operation that is not caused by the elemental qualities” (76.1c). For Aquinas, salt and pepper is a mere mixture, because the bits of salt and pepper have the same function whether mixed or segregated. There is no interaction that produces something over and above the parts. On Aquinas’s terminology, this sort of mere mixture counts as “an apparent mixture, one that occurs through minute [parts] being positioned next to one other” (76.4 ad 4). In the case of a complex substance, Aquinas speaks of “a true mixture, one that occurs throughout the whole” (ibid.). He devotes an entire treatise, *De mixtione elementorum*, to working out the details of this problem.⁹

Although Aquinas does not explicitly articulate the account I am proposing, he comes close in his *De anima* commentary, when he explains why only living beings can be said to take nourishment, strictly speaking. That is not an obvious truth for Aquinas, because he holds that a thing is nourished when it “receives in its very self something that serves to maintain it” (II.9.135–36). On this criterion, it might seem that fire is nourished: one feeds a fire, after all, by adding more wood. Aquinas maintains that this is not a genuine case of feeding or nutrition, because strictly speaking the criterion is not satisfied. The original fire is not maintained when more wood is added, because the additional wood starts up a different fire.

This passage is relevant because it shows that fire does not have the requisite unity to satisfy the criterion:

the whole fire that comes from many lit fires gathered together is not one fire *simpliciter*, but seems to be one due to aggregation, in the way that a heap of stones is one heap (145–48).

In the case of fire, this is not surprising. But Aquinas goes on to reach a more general conclusion: that only living things have the requisite unity. Only in their case is “life maintained through food in the *same* part in which it was before. . . . [E]ach one of their parts is both nourished and grows” (150–54). In contrast:

This does not happen in things without souls; they seem to expand through addition. For it is not the case that what was there before expands, but that a different, greater whole gets established through the addition of something else (154–57).

Molecules

It would be an interesting and worthwhile project to apply Aquinas's extended criterion to modern chemistry. One might initially think it obvious that individual atoms will count as substances. But this is problematic in a number of ways. First, it is not clear that an isolated atom of, say, gold, genuinely counts as gold, given that it would lack most of the distinctive properties of gold. (Van Inwagen 1990 quotes an expert who claims it takes sixteen or seventeen atoms to make gold (p. 17).) Also, atoms bound together as a molecule will make a single substance. Indeed, some definitions of 'molecule' appear to be virtually equivalent to Aquinas's extended criterion for substancehood:

A molecule is considered the smallest particle of any given kind of matter which, when taken alone, retains the properties of that kind of matter. ("Molecule," *Columbia Encyclopedia*, 2nd ed.)

A molecule of gold would be the smallest quantity of gold that retains the properties of gold (i.e., the essential properties, whatever they are). The same is true for a compound, like salt. Sodium and chlorine, when joined in an ionic bond, are not separate substances, because together they take on a new set of properties, which they lose when separated.

A still harder case is bronze, a class of alloys most often composed of copper and tin. These atoms form crystals of regular shapes, and any given crystal is likely to have both copper and tin atoms. As an alloy, bronze has properties quite different from those of its component metals, and this is what makes it plausible to think of bronze as a distinct kind and a viable substance candidate. At the microscopic level, the atoms that alloy to make bronze mix in a random fashion, and can mix in varying proportions. (Such variability is what distinguishes alloys from compounds.) This opens the door to problems of vagueness. When is there enough tin for there to be bronze, and when too much tin? When is copper pure enough to be pure copper? See Rogers (1964), p. 51: "Actually, a metal almost always contains measurable amounts of other elements even after energetic efforts have been made to eliminate them."

Things without souls do not meet the criterion for nutrition because the stuff that is added does not form a part of the original substance. Genuine nutrition does involve the addition of new material, food, but this food becomes part of the original substance. When fire is added to fire, in contrast, there is mere aggregation without true unity. The original substance is not maintained, but instead "a different, greater whole gets established"

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(as above). Aquinas believes that this is true for all nonliving things, and so he concludes that “only ensouled things truly grow” (152–53). Applying this same logic to stones, we would have to say that liquifying and then cooling some sort of rocky material so as to form a larger stone does just that: it produces a “different, greater whole.” Stones cannot grow, because they lack the requisite unity. In general, adding material to anything nonliving produces mere aggregation. The moral is that living things are the only aggregates that are unified substances.

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Artifacts do not count as substances, no matter how highly organized. Lumps do not count as substances, even if those lumps are homogeneous assemblages of a single kind of substance. In general, nonliving things seem to be substances only at the microlevel. All of this is the natural consequence of a claim we saw Aquinas make in §3.1: that simply being joined together is not sufficient for being *unum simpliciter*. But this line of thought does not lead Aquinas, in Leibnizian fashion, to reject all but the most simple substances. He accepts that elements can mix to form complex substances. Among these mixed substances, the most complex by far are living things. Here the constituent parts depend for their existence on the survival of the living organism. So whereas bronze is a substance only at the atomic level, a whole human being counts as a substance, as does a whole tree.¹⁰

How exactly do living things satisfy the extended criterion for substancehood offered in the previous section? How is it, in other words, that a soul “perfects not only the whole, but each part” (76.8c)? Aquinas’s reasoning crucially depends on an application of Aristotelian homonymy: that the parts of a human being exist only for as long as the human being exists. A corpse is not a human body, and so too for all of the parts of that corpse:

Just as one does not speak of an animal and a human being once the soul has left – unless equivocally, in the way we say that an animal has been painted or sculpted – so too for the hand and eye, or flesh and bones, as the Philosopher says. An indication of this is that no part of the body has its proper function once the soul has left, whereas anything that retains its species retains the operation belonging to that species (76.8c).

It is not evident from our ordinary ways of talking that this invocation of homonymy is correct. Socrates, for instance, immediately after deploring the effects of careless speech, is made to remark in the *Phaedo* that “it is only my body that you are burying . . .” (115e). But Aristotle, and Aquinas following him, hold that such claims are equivocal, and that neither my body nor any of its parts survives death (see, e.g., *Meteor.* IV 12, 389b31–390a19, and Shields 1999, ch. 5). If that is right, then the soul passes the extended criterion of 76.8c. It follows, then, that the soul is a substantial form and a human being a substance.

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As usual, Aquinas is not content merely to make an appeal to Aristotle's authority. Such arguments from authority, he remarks near the outset of *ST* (1.8 ad 2), are "the weakest" of all arguments. In the above passage he goes on to give an argument for such homonymy, pointing to the fact that the body's parts do not maintain their function after death. This line of argument explicitly acknowledges something assumed several times in §3.2 about how we should apply the extended criterion: in asking whether a form gives existence to all of the parts, and whether those parts cease to exist when the form ceases to exist, we should focus on the function of the parts. This claim is consistent with several arguments considered in Chapter 2. There we saw how Aquinas establishes that the body is part of a human being because the body is required for essential human functions (§2.1); also, we saw him establish the rational soul's subsistence on the basis of its capacity for continued operation (§2.2). Both of these arguments were based on the principle that "any given thing is identified with what carries out the operations of that thing" (75.4). Existence, then, depends on the capacity for ongoing function. At death the body ceases to exist; this is true insofar as it ceases to function:

Damage to the heart destroys the soul's operation in all of the body's parts. *As a result* it destroys the existence of these parts, which was maintained by the soul's operation (I *SENT* 8.5.3 ad 3).

The hands and eyes of a corpse cannot be identified with the hands and eyes of the formerly living body, because they have lost the capacity to carry out their former operations. Although the point is most clear in cases where the part's function is obviously lost, Aquinas maintains this claim generally, down to the least part of the body: "not only does the animal not remain, but also no part of the animal remains" (*InGC* I.15.108). It is easier to miss this point, he acknowledges, in the case of flesh and bones. But these parts remain no more than does a hand or an arm – even if "in these [latter] cases the soul's operations are more evident" (*ibid.*). Flesh and bones had a function as well, and that function has now equally been lost.

If the human soul is to satisfy Aquinas's extended criterion, then Aristotelian homonymy must hold for every part of the body, even for very small pieces of bone and flesh. This may seem implausible, for the same reason it seemed that tiny pieces of brick remain in existence when the house goes out of existence. But there is an important disanalogy here, which Aquinas can exploit in insisting that human beings are substances in a way that houses are not. Tear down a brick house and the parts of the brick remain unchanged. With respect to how the parts of the brick are functioning and what they are doing, nothing has changed. (They are, of course, no longer parts of a house. But that is a mere Cambridge change, not a real change to the brick itself.) Matters are quite different for the parts of a living body – even for parts that remain within the body for a very short time. Consider an example of Peter van Inwagen's: a carbon

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atom that passes into and out of the body within a few minutes. The atom enters the digestive system as sugar, moves into and through the bloodstream, is oxidized (in the process producing energy), and is finally exhaled as part of a carbon dioxide molecule. At each step this atom is acting (or being acted on) in ways that are characteristic of living organisms. The atom is, in van Inwagen's words, "caught up in the life of an organism" (1990, p. 94). It starts out as sugar, it ends up as carbon dioxide. In between, the carbon atom should be described as part of a human being rather than simply as carbon. Its identity is subsumed by that of the whole organism. Again, this makes for a contrast with the case of a house. The clay bricks remain clay, regardless of whether they compose a house or lie scattered on the ground. And, again, Aquinas's criterion for making these distinctions is the function of the material. It is the complex interrelatedness of living organisms that gives them their special kind of unity.

Not all living things are equally complex, and in some cases this lack of complexity poses a *prima facie* difficulty for the extended criterion. Aquinas identifies two such cases in his *De anima* commentary:

- the case of a slip from a plant, which will survive if replanted;
- the case of a worm from which a cut-off piece can survive.¹¹

These cases pose a challenge to the extended criterion; they suggest that not all living things are substances, insofar as their souls do not meet Aquinas's test for being a substantial form.

Such cases do not give us reason to abandon the extended criterion; they are in fact the proverbial exceptions that prove the rule, by pointing the way toward a clearer understanding of the extended criterion. Take the case of a plant. With care and skill, a cutting can be made to survive on its own. But the operation does take care and skill: a piece of plant cut off at random and left untended will almost certainly not survive. The parts of the plant display a mutual dependence that aggregates display not at all, or at best very slightly. It is precisely this mutual dependence that is characteristic of substances. So the case of a cutting from a plant, in virtue of the difficulty involved in this operation, in fact helps to confirm the distinction between substances and mere aggregates.

Here one might raise a further worry. If mutual dependence comes in degrees, then what justifies Aquinas in drawing a hard and fast distinction between substantial and accidental forms, or between substances and non-substances? Perhaps human beings, plants, and bronze lumps should be viewed on a continuum, with human beings highly organized, worms moderately organized, and bronze lumps barely organized. A bronze lump could be regarded as a weakly unified substance, or it could be regarded as a highly unified aggregate. The difference wouldn't amount to much – which would explain why Aquinas is never very concerned about fixing his terminology in this area.

Although this suggestion is plausible, it fails to do justice to the insight expressed by the extended criterion. The whole force of the doctrine of

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substantial forms comes from there being a dramatic divide in the natural world between the organizational unity of substances and the lack of such unity in aggregates. The case of a worm illustrates this point. A cut-off piece may survive for some time, but not just any cut-off piece will do. One has to cut off enough of the worm, and one cannot repeat the process too many times. A worm chopped into twenty pieces is simply a bloody mess. So the case of a worm, on its face problematic for Aquinas, in fact helps to illustrate the metaphysical divide between substances and non-substances. A mid-sized piece of bronze entirely lacks the kind of mutual dependence that one finds even in a worm. Although it is not infinitely divisible, for all practical purposes bronze can be divided without end. For this reason, it is simply not plausible to put a bronze lump on the same continuum as living things.

We might imagine a species of worm that could be divided into twenty pieces, or even a hundred pieces, each piece still alive. Such a worm would be much more like bronze, and in such a case we might speak not of having

Ecosystems

Just as aggregates of simple substances can appear to have the unity of genuine substances, so can aggregates of living things. Consider a rainforest, where the highly specialized species of life depend on one another for their existence. Laura Landen (1995) develops this example in the context of Aquinas's theory, and remarks of such interdependent species that "without the forest, they would not be what they are; indeed, they would not be" (p. 83). In light of Aquinas's extended criterion for substancehood, such interdependence seems to entail that the rainforest is itself a substance. Surely that is not right.

The mistake is in supposing that exotic plants and animals literally cannot survive outside the rainforest. Perhaps it could be true of the occasional species that we do not know how to keep it alive outside its native habitat. But by and large the parts of a rainforest *can* exist outside of that environment, in a simulated rainforest. So, strictly speaking, the parts of a rainforest are not interdependent in the way the parts of a substance are. Still, one might wonder: Is this so different from taking a cutting from a plant? Zookeepers take elaborate measures to keep their animals alive. Gardeners do the same with their cuttings. The difference is that while a plant may have a few branches that can survive apart, an ecosystem can be split up into millions of parts. Each insect could be shipped in a different direction, each clump of dirt scattered, each plant dug up and delivered somewhere else. The rainforest would no longer exist, of course, but its parts would. This is the hallmark of a mere aggregate.

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a worm, but of having worm – that is, we might use ‘worm’ as a mass term. If worms were like that then we would have to acknowledge that the distinction between substance and nonsubstance is not as clear-cut as Aquinas supposes. But although we might imagine such a living organism, I wonder whether we would be imagining a coherent possibility. I doubt whether anything divisible in the way that a bronze lump is could actually be considered living. If it were considered living, I doubt whether it could be considered a *single* living substance. Moreover, even if such a creature is possible, this shows only that Aquinas’s metaphysics does not hold as a matter of conceptual necessity. There *might* be worlds where no meaningful distinction could be drawn in Aquinas’s terms between substances and aggregates. But ours is not that world. In this world, there is such a distinction. Aquinas’s ontology of substance is not a necessary and a priori truth about reality, but neither is it based on mere convention or linguistic fact. It captures fundamental features of the natural world as it is.

The following passage summarizes the argument:

(a) For since the body of a human being, or of any other animal, is a kind of natural whole, it will be called one from the fact that it has one form perfecting it – and not just as an aggregate or composite, as with a house and other such things. (b) Thus every part of a human being and an animal must receive its existence and its species from the soul as its proper form. (c) And thus the Philosopher says that once the soul has left, neither the eye nor the flesh nor any other part remains, except equivocally (*QDA* 10c).

Aquinas’s reasoning runs as follows.

- (a) Living things are unified in a distinctive way; their unity is greater than that of artifacts and nonliving aggregates. (I am extrapolating. The passage speaks only of animals, not of all living things, and does not explicitly say that natural aggregates like rocks fall in with houses. But these points seem implicit.)
- (b) The reason living things have this special sort of unity is that “every part . . . must receive its existence and its species” from its substantial form. That is, living things meet the test I have been calling the extended criterion.
- (c) The rationale for thinking that living things meet this test is an application of Aristotelian homonymy: without the substantial forms, each and every part goes out of existence.

This account explains the difference between substantial and accidental forms, and explains why the soul is a substantial form. Also, as promised at the start of §3.2, it explains why a substantial form has a special kind of unity with its matter. An object is unified to the extent it is undivided: “A thing is related to unity in proportion to its being related to undividedness. . . . That which is undivided *simpliciter* is said to be one thing *simpliciter*”

3.3. BODY AND SOUL AS A UNIFIED SUBSTANCE

(I *SENT* 24.1.1c). More precisely, “a being is said to be one thing when it is indivisible or undivided” (*InMet* X.3.1974). The second formulation is more precise because it is indivisibility, rather than being in fact undivided, that characterizes the union of substantial forms with their matter. It is not obvious why we should say an accident is *divided* from its subject. But accidents are *divisible* from their subjects insofar as an accident may come and go while the subject remains. In contrast, the substantial form is indivisible from the matter it actualizes, in the sense that if that form is destroyed, the substance as a whole is destroyed, as is each of its individual parts. Because substantial forms are thus inseparable from their matter, they make up one thing with their matter, *unum simpliciter*.

Aquinas conceives of indivisibility from the perspective of the parts, not from the perspective of the whole. This makes a crucial difference. If we look at a human being and ask whether the body is separable from the whole person, it looks as if the answer is yes. We can lose legs and arms, organs and tissue without the person’s being destroyed. Moreover, we lose and gain cells on a constant basis: liver cells are replaced within five days (van Inwagen 1990, p. 94). From this perspective, it looks as if the body is eminently separable from the whole person. Aquinas looks from the opposite perspective. Rather than focusing on whether the whole survives without some part, he asks whether the parts can survive without the whole. In the case of a living substance, they cannot. The cells of the liver cease to exist when they pass out of the body. They no longer function as they once did, contributing in a certain way to a living organism. From the perspective of the parts, then, the substance is an indivisible whole. From this perspective, living substances appear to have a unity fundamentally different from that of nonliving aggregates.

This account has much to offer. It is highly plausible to suppose that the unity of a living substance is qualitatively different from the unity of objects that can be dissolved and divided without destroying their parts. It is perhaps surprising to find Aquinas committed to the view that these other objects are not substances at all, and that substances are found in nonliving objects only at the atomic level. Yet once one sees the sort of unity he claims for living substances, one should be struck by the absence of that unity in mere artifacts and aggregates. In denying that artifacts and aggregates possess this sort of unity, the unity of substances, Aquinas is not denying that such things are real or that they exist. Houses and statues exist, and so do forests, beaches, and pints of strawberries. But all of these objects have a weaker claim to be single, individual things.

This conception of soul as substantial form also sheds light on Aquinas’s puzzling claim that the soul, like all forms, exists as a whole in every part of the matter that it actualizes. In 76.8, Aquinas defends this doctrine with regard to the soul. Elsewhere he makes it clear that the doctrine holds more generally: “it is apparent in the case of every form that it is whole in the whole and whole in each part” (*SCG* II.72.1485). Aquinas thinks there is nothing at all puzzling about this aspect of form. The form of whiteness,

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he explains (*SCG* II.72.1485), covers the whole surface of a white object, and that form is whole in each part – inasmuch as each part is equally white. In much the same way, the soul of a living being exists in every part, because every part is alive, and (as we have seen in §1.1) to say that a body has soul is simply to say that it has life.¹² If some are confused on this question, it shows simply that they have the wrong conception of soul. Thus, after explaining how soul is present throughout the body, he adds:

Neither is this difficult to grasp for someone who understands that the soul is not indivisible as a point is, and not something nonbodily joined to something bodily in the way that bodies are joined to one another (*SCG* II.71.1485).

In his *Sentences* commentary he makes the point even more clearly. Speaking of those who took the soul to have a determinate location in the body, he writes,

The cause of this view was that in two respects they had the wrong picture [*falsa imaginatio*]. First, they pictured soul's being in the body as if in a place, as if it were only its mover and not its form, as a sailor is in a ship. Second, they pictured the soul's simplicity being like that of a point, as if it were something indivisible that has an indivisible location. Each of these assumptions is ridiculous (I *SENT* 8.5.3c).

If it seems odd to think of the soul as spread throughout the body, this indicates that one has the wrong picture of what soul is. Soul is not a mysterious nonextended force, located at some central point within the body and moving the body as one would move a puppet. Soul exists throughout our body, giving it life.

This account has one final advantage: it explains the unity of soul and body in a way that allows for the human soul's peculiar autonomy relative to the body. Indivisibility is analyzed in one direction: the substance and

Simplex, multiplex

The *sed contra* to 76.8 quotes Augustine in defense of the doctrine that “in any one body, the soul is whole in the whole body, and whole in each part of it” (*De trinitate* VI.vi.8). Augustine had introduced this claim to help illustrate how God can be at the same time “simple and multiple.” Aquinas accepts this suggestion wholeheartedly, and even extends the claim to all forms. But others weren't so sure. John Buridan (1295–1358) would accept the claim in the case of soul, but he writes that such a thing “is truly miraculous and supernatural” (*De anima* II.9). How, he wonders, could something be nonextended and yet exist throughout the body? In effect, Buridan accepts Augustine's illustrative analogy but dismisses its explanatory value. For discussion of Buridan's view, see Zupko (1993).

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its parts cannot exist without the form, but it remains possible for the form to exist without the substance. This leaves room for Aquinas to reply to the seemingly insurmountable objections of 76.1 (described at the start of this chapter). First, it is entirely consistent for the rational soul to be united with the body and yet be able to operate and exist independently of the body (ad 1, 4, 5). Second, the soul can be united to the body without itself becoming material (ad 2, 3). Third, the soul's immortality does not stand in the way of soul and body's being *unum simpliciter* (ad 6). Even though the soul can exist without the body, the body remains inseparable from the soul, in that it cannot exist without the soul. So despite being part of a unified material substance, the soul preserves the autonomy necessary for immortality and abstract thought.

3.4. Reductive materialism

We have now seen the failure of certain nonreductive accounts (§3.1) and the kind of unity supplied by Aquinas's own type of hylomorphism (§§3.2 and 3.3). A question that remains is whether another sort of reductive account might work at least as well. For modern philosophers, the obvious candidate is some sort of reductive materialism. In this section I return to the ancient materialists discussed in Chapter 1. In view of the preceding sections, we can understand more fully just why Aquinas rejects ancient materialism, and this in turn will illuminate Aquinas's attitudes toward materialism in general.

The ancient naturalists, Aquinas tells us, "said that the only things that exist are bodies, and that what is not a body is nothing. And, in keeping with this doctrine, they said that the soul is a body" (75.1c). As elsewhere, Aquinas is suppressing interesting details for the sake of the concision and lucidity that is his announced goal (1a pr; §In.2). Not all of the ancients held that the soul is a body; some, in particular, Empedocles, proposed that soul is the harmonious composition of various material parts. Aquinas was well aware of these other views; he discusses them in detail in his commentary on *De anima* I. A complete treatment of non-Aristotelian attempts to unify soul and body would have to deal with such accounts, but *ST* does not aspire to completeness, and 76.1 is already the longest article in the Treatise. So in order to understand Aquinas's views we need to look elsewhere.

The fact that some ancient naturalists attempted to define soul in terms of harmony illustrates that the ancients, even as understood by Aquinas, were not so hopelessly crude and misguided as to reject all talk of forms, properties, and states. In addition to their elemental bodies (fire, water, etc.), the ancients recognized the existence of forms such as color, shape, and position (see §1.2). Soul, on this harmony account, would be another such form, existing for as long as the various components of the body exist in a harmonious or well-balanced state. There is something plausible about the theory, Aquinas admits, because it seems that the soul remains with the body for as long as the body retains its harmonious composition.

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Moreover, as soon as that harmony is lost, the soul seems to disappear. It is tempting to infer, then, that the soul just is the body's harmonious composition. Still, Aquinas argues that the inference is fallacious: harmony is not the soul but the proper bodily disposition for the soul (*InDA* I.9.196–212). This sort of bodily disposition is essential to a body's being ensouled (see §12.4) but cannot be identified with the soul.

Why not? Aquinas's answer to this question grows out of the status that harmony has as a form. The ancients identified their basic material principles as the enduring substances that exist through change (§1.4). Added onto these substances were various forms:

Matter, which they said was the substance of a thing, endures through every change. Its states, however, are changed: the form, and all the things that are added onto the matter's substance (*InMet* I.4.74).

These added-on forms are accidents; they come and go while the substance remains. On the ancient theory, harmony would be one such added-on form, and therefore to identify the soul with harmony is to make the soul an accidental form. Aquinas argues that it is absurd to treat the soul as an accidental feature of a living thing (*InDA* I.9.65–69). On this ancient account, a substance could remain in existence while the substance goes from living to dead or vice versa. The soul-as-harmony theory treats *being alive* as a property much like *living in Philadelphia*, as if dying is no more substantive a change than leaving town. This is of course implausible: dying seems to be no mere accidental change, but to represent a fundamental change in a thing's nature. If an argument is even needed here, we have seen how Aquinas would invoke Aristotelian homonymy: a living body has existence only in virtue of its soul, and goes out of existence when separated from that soul (§3.3). In maintaining that all things can be given a fundamental explanation in terms of matter, the ancients were forced to treat as accidents attributes such as *having life* that manifestly are not accidents.

Aquinas often quotes Aristotle's remark that "for living things, living is existing" (*De an.* II 4, 415b13). The point is that living and existing are not wholly distinct attributes of a living being. Living just is the mode in which living things have existence, and so it is absurd to give a different explanation for each, and to treat living as an accidental quality that might come and go while the substance remains in existence. The soul does not merely make the body be of a certain kind, the living kind; the soul also gives a body its very existence. "Soul itself forms the body that fits it; it does not take up one already prepared" (*InDA* I.8.358–59). On Aquinas's account, the soul gives a living substance both existence and life, because to give a substance life just is one way of bringing it into existence.

Aquinas thinks this mistake about the soul is symptomatic of the ancients' most general failing: their inability to distinguish natural substances from artifacts, or substantial forms from accidental ones. The heart of their problem was that they held a mistaken theory of matter:

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The ancient natural philosophers, not able to reach all the way to prime matter . . . , claimed that some sensible body was the prime matter of all things – fire, air, or water. And in this way it followed that all forms would come to matter as it [already] actually existed, as occurs in the case of artificial things. (For the form of a knife comes to iron when it already actually exists.) And so they held a view about natural forms that was just like their view about artificial forms (*InPh* II.2.149).

The ancients failed to recognize prime matter, preferring instead to take certain bodies as their basic elements (§1.4). But because the ancients described these bodies as actually existing – as having their actuality built into them – it follows that any further forms must be accidents. For it is true by definition that accidental forms are ones that do not bring existence to their subject, but rather inhere in substances that *already* exist (77.6c; *De principiis* 1.20–35 [339]). A craftsman does not, in making a knife, bring into existence a new substance. Instead, the artist takes the substance, the iron, and gives it a new accidental form, a shape. For the ancients, the only substances were their basic substances. They were therefore compelled to treat complex substances, even plants and animals, as if they were artifacts.

On the ancient account, therefore, all forms would be accidental forms. As a result, nothing would ever be generated anew, or thoroughly corrupted; all change would be modification, since their basic substances (air, water, etc.) endure through all change. Aquinas believes that from this failure we can come to grasp the proper relationship of form and matter. Indeed, “substantial generation and corruption are the starting-points for one’s coming to grasp prime matter” (*InMet* VIII.1.1689). When one sees what is required for genuine coming-into-existence and going-out-of-existence, one sees what prime matter must be like:

All those who hold that the first subject is some sort of body, such as air and water, claim that generation is the same as alteration. On the basis of this reasoning, then, it is clear how *we* must reach an understanding of prime matter (*ibid.*; see *InGC* I.1.5).

We, Aquinas tells us, must understand prime matter as something that exists only insofar as it is actualized through a substantial form. Because the ancients were wrong about prime matter, identifying it with something actually existent in its own right, they ended up thinking of generation and corruption as mere accidental changes. On their view substances never go out of existence, and new substances never come into existence.

Of all the ancient theories of soul, the harmony theory “most seemed to approach formal causes.” In actual fact, however, “the ancient philosophers never took up formal causes, only material ones” (*InDA* I.9.25–28). The harmony theory represents movement in the right direction, Aquinas thinks, because at least it identifies soul with a form rather than with a body. But even here the ancients were not arguing in terms of formal causes, because they failed to understand the nature of substantial forms. Aquinas thinks that the only tenable theory of human nature is one that explains human beings in terms of the union of substantial form with matter. Given

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his theory of substance, and the way he thinks a human being is one thing *simpliciter*, he has reason to conclude that “the only way that is left, then, is the way that Aristotle proposes . . .” (76.1c). Only the hylomorphic theory has seemed able to give human beings the sort of unity required of a genuine substance.¹³

Aquinas’s quarrel is not with materialism in general. Except for the special case of intellectual substances (see §2.2), Aquinas is himself a kind of materialist (see §2.3). But he finds reductive materialism objectionable insofar as it eliminates forms from playing even an explanatory role. The ancients did not entirely eliminate forms, but they failed to develop a theory of forms adequate to account for substantial change and unity.

It is perhaps not obvious how this critique of ancient materialism should be extended to cover modern versions of materialism. So let us shift to the beginnings of modern philosophy, and to Francis Bacon’s programmatic denunciation of Aristotelianism:

Matter rather than forms should be the object of our attention, its configurations and changes of configuration, and simple action, and law of action or motion; for forms are figments of the human mind (*New Organon* I.51).

This is far cruder than anything we have seen from the medieval or ancient period; if Aquinas had had Bacon in front of him, he wouldn’t have needed to portray the ancient materialists in caricature. Bacon tells us to give up on form, and to focus on configuration, as if that were not itself a paradigmatic kind of form. In fairness, Bacon no doubt intends to attack forms of a more abstruse sort, above all, substantial forms. And in light of the dismal decline of philosophy during the so-called Renaissance, it is easy to feel some degree of sympathy with Bacon’s complaint. In fact, he proposes quite a reasonable test: “Wherefore, as in religion we are warned to show our faith by works, so in philosophy by the same rule the system should be judged of by its fruits” (I.73). Even by Bacon’s own standards, however, we can now point to the fruits of an analysis in terms of substantial forms. Bacon wanted philosophers to focus their efforts on explaining the natural world; Aquinas uses substantial forms to do just that. On his analysis, the distinction between substance and nonsubstance corresponds to a genuine and important distinction among natural entities. The theory of substantial forms gives us a way – Aquinas believes the only way – to explain the nature of that difference, and to explain why some objects have a distinct kind of unity that warrants their being described as substances.

Still, what does this have to do with philosophy today? Reductive materialism, in suggesting that all things ultimately reduce to material explanations, seems committed to supposing that even the study of living organisms can ultimately be cashed out in terms of microlevel material events. It is now very common among philosophers of science to deny that this is so: a real understanding of biology, for instance, is said to show such reduction to be impossible even in principle (see, e.g., Dupré 1993).

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Although Aquinas never shows much interest in empirical science, he gets this sort of antireductionism out of his metaphysics. To understand what is special about living organisms – their coherence and endurance over time, the complex behavior they exhibit – one cannot look simply at their constituent material parts. The theory of substantial forms attempts to shift the focus of analysis to a higher level, where an organism can be studied not as a collection of discrete parts but as a single, unified substance.

In this light, it becomes clear that the soul is more than just a placeholder for whatever it is that gives life to living things (see §1.1). Moreover, though Aquinas devotes the remainder of the *Treatise* (QQ77–89) to analyzing the human soul's various powers and operations, the conclusions he establishes here show that the soul is more than just a collection of powers carrying out the various operations of life. Beyond these discrete functions of nutrition, sensation, and intellection, the soul has the more basic function of accounting for the unity of a living organism.

When human life begins

*Generatio unius semper sit corruptio
alterius.*

(118.2 ad 2; see p. 124)

The nutritive and sensory capacities in a human fetus are a natural result of procreation (§4.1). But unlike other animals, human beings are only partly a product of natural biological processes. The rational soul is infused by God once the fetus has developed sufficiently to receive such a soul (§4.2). Aquinas believes that this rational soul, rather than completing the developing fetus, corrupts and replaces that fetus with a different, now human, substance. These views have interesting implications for the modern abortion debate, in that they show how traditional theological conceptions of God and soul actually give us reason to deny that early-term fetuses are human beings (§4.3). All of this is underwritten by Aquinas's claim that a human being has only one substantial form, combining all of the capacities of the nutritive, sensory, and rational parts (§4.4).

4.1. Conception

The main challenge in interpreting Aquinas's account of the soul-body relationship has been to resist the appearance of an entirely ad hoc theory. The human soul's union with the body should follow as a natural consequence of more general principles about the nature of life, matter, and form. But, of course, human beings are exceptional, in that we combine the immateriality of an angel with the materiality of brute animals. We are, to use Nietzsche's phrase, a hybrid of plant and ghost (*Zarathustra* prologue, ch. 3). This hybrid nature is reflected in Aquinas's account of how human beings are produced. The Treatise does not consider these questions in any detail, preferring to reserve discussion for later in 1a (esp. Q90 and Q118). But some understanding of the issue helps to shed light on human nature.

Unlike other material beings, which are generated from matter through ordinary natural means, humans are only partly a product of nature. Although our nutritive and sensory capacities are the straightforward result of sexual reproduction, no different from what takes place in other animals, our mind is infused by God. This supernatural event naturally raises the most perplexing philosophical questions regarding our origins, but it is worthwhile to look first at the biological part of the story.¹

4.1. CONCEPTION

In describing the generation of natural substances, Aquinas takes himself to be choosing Aristotle's biology over Plato's metaphysics. One key tenet of the theory of Forms, as Aquinas understands it, is that the Forms explain the existence and nature of material particulars.

Plato claimed that the Forms of natural things subsist without matter. . . . He said that by participation in these, corporeal matter is formed, so that individuals are established naturally in their proper genera and species (79.3c).

Corporeal matter, by participating in the Idea of stone, is made this particular stone. . . . Sensible forms that are in corporeal matter emanate from Ideas as likenesses of them (84.4c).

So understood, the Forms provide an account of how particular things are generated. The account is hardly satisfying, however, even if we grant the existence of such Forms, because it ignores the particular causal principles at work in individual cases. Aquinas follows Aristotle in appealing to internal principles as an explanation of natural generation. In every case where a substance is generated, there must be some *material* from which the new substance is generated, there must be a *form* that the substance takes on, and there must be an *agent* to make the transformation occur. (On the role of final causes, see §§In.5, 6.2, and 7.1). With this scheme in place, Aquinas paraphrases Aristotle in concluding, "if there are Forms [*species*] beyond the singulars, they are of no use in the generation and substance of things" (*InMet* VII.7.1429; see 1033b27).²

For a process to count as *generation*, in the technical Aristotelian sense, it must involve a transformation of existing material in such a way that a different substance is produced. (The process would count as *creation* if it involved producing something ex nihilo, and would count as mere *alteration* if the change did not produce a new substance.) By definition, then, matter is never generated. Aquinas stresses that forms, too, are never generated. "Strictly, forms are not made, but are brought out from the potential of the matter" (*InMet* VII.7.1423). Generation consists in the production neither of the matter nor of the form, but of the matter-form composite (the whole animal, for example). "Strictly, only the composite is generated" (*De principiis* 2.96–97 [347]).

Where do forms come from? In stressing that forms are "brought out" from matter, Aquinas highlights his resistance to dualistic forms of hylo-morphism. Form and matter are not separate entities with separate causal powers. Organized matter just is informed matter, and by giving matter a certain organization one gives it a certain form. (This is a point I develop further in the *Excursus* to Part I.) "No one makes a form, nor is a form generated. . . . The particular is what is generated, because everything that is made, is made from matter" (*InMet* VIII.3.1716). This holds for generation across the board – not just for mundane chemical reactions, but even for the generation of living things: "to produce a sensory soul is

nothing other than to convert matter from potentiality to actuality" (*QDP* 3.11 ad 11).

Aquinas criticizes others for going wrong in various ways on this point. Some thought that all forms had to be created *ex nihilo*: "that the natural agent disposes only the matter, and that the form, which is the ultimate perfection, comes from supernatural sources" (*QDP* 3.11c; see 45.8c). Others, not wanting to appeal to external causes, thought that the forms must actually preexist within matter; Aquinas refers to this as the hidden-form theory (*latitatio formarum*). In both cases, the mistake seems ultimately to come down to a misunderstanding of the matter-form relationship. Those who opted for a creation account

(1) held that forms are made, and (2) could not hold that they were made from matter, since (3) matter is not part of form. So it followed that (4) they were made *ex nihilo*, and consequently that (5) they were created (*InMet* VII.7.1430).

Aquinas simply denies (1). Forms are not made, directly, but come into existence as a result of changes to matter. Aquinas accepts (3), but evidently does not suppose that forms are distinct entities. Hence changes to the matter are sufficient to actualize new forms.

Rather than describe forms as actually preexisting within matter, in hiding, Aquinas says that forms exist potentially in matter. The food in my refrigerator is potentially a quiche, but not actually a quiche. Something has to act on that food, actualizing its potential. Sexual reproduction provides a more complex illustration of the same pattern. Aquinas believes that the mother supplies the material, and that the father is the agent, inasmuch as his semen is what causes the material supplied by the mother to take on the form of an embryo (118.1 ad 4, following *Gen. An.* I 20). The semen contains a *virtus formativa*, which is what directs the embryo's development toward the appropriate form, its soul. This formative power is not itself a soul (if it were then the semen would be a living creature even before conception (*SCG* II.89.1738)), nor does it even become the soul. Instead, the *virtus formativa* directs the development of the embryo, which goes through a series of forms on the way to its ultimate nature. While the embryo changes, this *virtus* "remains the same . . . from the start of the formation until the end" (*SCG* II.89.1743).

Cooking and sexual reproduction exemplify different kinds of generation, the one by craft or art and the other by nature. A distinctive feature of natural generation is that its principles are internal. Although the father is the remote cause of generation, the direct cause is the semen, which acts as a kind of instrument through which the father exercises his indirect agency.³ Yet not all natural generation involves an active internal cause. Aquinas describes how some wrongly supposed that natural generation requires "an active principle in the matter, which is the form preexisting potentially in the matter" (*InMet* VII.8.1442a); he describes this as the inchoate-form theory (*inchoatio formarum*).⁴ One problem with this theory is that it tends to collapse into the hidden-form theory, because *potentially*

existing forms can exert some causal efficacy only to the extent that they are *actual* (1442δ). A more serious problem is that not all cases of natural generation involve an active internal principle; the internal principle may instead be “passive and material” (1442ζ). This is true even as regards the production of living things. Aquinas follows the science of his day in believing that both plants and lower animals can be spontaneously generated out of decaying matter through the sun’s power. As a result, even some animals can be generated without any sort of *virtus formativa*. “In animals generated from rotting, the power of the heavens takes the place of the formative power in the semen” (II *SENT* 18.2.3 ad 5). It was cases of this sort that provided the impetus for the hidden-form and inchoate-form theories. But Aquinas’s view is that the sun brings out new forms in rotting matter simply in virtue of producing the right sorts of changes in the right kind of matter. This cannot happen in higher animals, because of their complexity. “The more perfect something is, the more is required for its completion. . . . Complete animals require the power of semen along with the power of the heavens” (*InMet* VII.6.1401).

There is, of course, much in this account that is wrong. Among other things, Aquinas overestimates the role of the heavens, supposing that the sun plays a direct role even in human reproduction; he regularly quotes Aristotle’s remark that “a human being, together with the sun, generates a human being from matter” (*Phys.* II 2, 194b14; see 76.1 ad 1). This is consistent with standard ancient and medieval views about the broader causal role of the heavens (see §2.3).

Aquinas correspondingly underestimates the female role. He supposes that the mother contributes only the raw material, and that the father is entirely responsible for the *virtus formativa* that directs the embryo’s development. But we can make his account come out not far from our modern understanding of the process if we specify that men and women make equal contributions. So described, the *virtus formativa* begins to look very much like DNA. Just as DNA provides a complete blueprint for the body’s development, so the *virtus* contains every feature of the developing body, but contains it “virtually” or “potentially” rather than actually (*SCG* II.89.1754). To explain this kind of virtual transmission from the parents to the embryo, Aquinas develops an analogy between the way semen contains the soul and the way a builder has in mind the plan of a house.

The active power that is in the sperm, although it is not actually the soul, nevertheless is the soul virtually, just as the form of a house in the soul is not the house actually, but virtually. So just as the house’s form can be made in matter from the house’s form in the mind, so the power of the semen can make a complete soul (except for intellect, which comes from outside) (*InMet* VII.8.1456).⁵

Of course, the analogy does nothing to explain the biological mechanisms at work. But the functional role he describes is quite apt: the *virtus formativa* works just like a blueprint from which the complete animal is formed.

Virtus formativa

Molière famously ridiculed the medicine of his day for the emptiness of its explanations. Why does opium put a person to sleep? Because of its *virtus dormitiva*, of course (*Le Malade imaginaire*, third interlude). Shouldn't Aquinas be held up for similar ridicule in attributing to semen a *virtus formativa*? That depends. The barb is justly directed at those who take an appeal to powers of this sort to be genuinely explanatory. Of course, we learn nothing about opium by attributing such a *virtus* to it, and we similarly learn nothing about semen.

But not all descriptions are intended to be explanatory. Sometimes we attach a label to a thing not because that helps us to understand it any better, but simply because we want a placeholder for a feature that we know it has but that we cannot explain (see Sober 1982). As long as human beings have known anything, they have known that semen plays a causal role in reproduction. But the mechanisms involved have been obscure until quite recently. It was not until 1953 that Watson and Crick identified the molecular structure of DNA. Even the microscopic spermatozoa within semen were unknown until discovered by Johan Ham van Arnhem in 1677. Aquinas might have made up some sort of account of the workings of semen, and then with a great show of precision appealed to this account. (Aristotle had described semen as a residue of nourishment (*Gen. An.* I 18).) But it is often better to offer a bare label, implicitly conceding that there is nothing more substantive to be said.

Still, even the roughest of sketches may be misleading. One crucial difference between Aquinas's *virtus formativa* and DNA is that DNA is present within each cell, eliminating the need for what Lewis Wolpert calls a "master builder" (1991, p. 10). Aquinas's account raises the puzzling question of mechanism: How will the *virtus* manage to implement its elaborate plan? What master builder will execute the blueprint? Dissatisfaction with the received account led early modern philosophers such as Malebranche to endorse preformation, the idea that the complete animal form is present from the start in the semen, and needs only to grow to full size (see Wilson 1995, ch. 4).

At the end of the passage just quoted, Aquinas signals one limit on the present account. Although the male's semen provides a blueprint for the entire development of the *body*, and hence for the entire development of the *animal*, it cannot be responsible for the development of the *mind*, nor accordingly for the development of *human beings*. For reasons we see below, Aquinas believes that human beings cannot be the product of biological

processes. Unlike other animals, we cannot produce offspring without divine assistance.

4.2. Infusion and abortion

There is an unfortunate tendency to conflate interest in medieval philosophy, especially in the work of Thomas Aquinas, with sympathy for the Roman Catholic Church. Inasmuch as the Church's intellectual foundations lie in medieval philosophy, above all in Aquinas, sympathy for his work naturally should translate into sympathy for Catholicism. But the conflation is still unfortunate, because in recent years the Church has identified itself with a noxious social agenda – especially on homosexuality, contraception, and abortion – that has sadly come to seem part of the defining character of Catholicism. So it should be gratifying, for students of medieval philosophy, to see how in at least one of these cases Aquinas provides the resources to show something of what is wrong with the Church's position.

In assessing the abortion debate, there is a temptation to say two very different kinds of things about why the dispute has been so fierce and protracted.

- The abortion debate endures because of the complexity of the issues. The debate is not just over whether abortion takes a human life, but also over questions about the right to life, privacy and a woman's control over her own body, the proper role of government, constitutional interpretation, the relationship between church and state, sexual freedom, birth control, and the value of life. In this tangled nest of questions, there is little room for common ground.
- The abortion debate endures because of the simplicity of the issues. The debate just is over whether abortion takes a human life. If it does, then all other questions fall away. But because the two sides disagree on when human life begins, there is little room for common ground.

I suspect the debate endures because it has both of these aspects. Opponents of abortion rights are in fact animated by the apparent simplicity of the issues. The cry of 'Baby killer!' is not just a rhetorical pose, but an apt expression of how one side views the situation. Ronald Dworkin has argued that very few actually believe such rhetoric, even among the most vehement antiabortion activists.⁶ But whatever the merits of Dworkin's proposal as an account of what people would believe on reflection, I suggest that pro-life activists at least think they believe the rhetoric, and that their thinking they believe it has the same effect as their actually believing it (assuming there is a distinction here at all). Moreover, I suspect that if the issues were not *perceived* to be so simple and stark, the debate would have died out long ago. Yet conversely, if the issues really were so simple, again the debate would have died out, because both sides would have come to feel the absurdity of waging a pitched battle over the abstruse

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metaphysical question of when human life begins. The abortion debate endures because there is much more at issue. If simplicity is the fuel that keeps the debate burning, complexity is the prevailing condition that prevents us from quenching the flames.

I want to ignore the complex legal and ethical questions, in favor of focusing on the relatively simple question: Does abortion take a human life? This simple question obviously rests on another: When does human life begin? If human life begins at conception, then abortion always involves the taking of human life. Aquinas denies that human life begins at conception, and we will see that his reasons for thinking so remain compelling today. But the underlying complexity of the abortion debate insures that answers to these two questions will not settle the debate. Even if abortion does not (always) take a human life, it may still be immoral, and may still be appropriately criminalized. Aquinas, for instance, holds that abortion is wrong even in the early stages of pregnancy.⁷ But there is a vast difference between conceiving of abortion as something unfortunate, immoral, even evil, and conceiving of abortion as killing a human being. The abortion debate has become the central ethical issue of our time because so many people have been persuaded that the issue is a very simple one: abortion takes a human life, and is therefore tantamount to murder.

Some philosophers have questioned this last inference, conceding for the sake of argument that human life begins at conception and then contending that nevertheless abortion is morally permissible. Judith Thomson's classic 1971 paper appealed to a woman's right to decide what happens to her own body, and much of the philosophical discussion since then has taken up the line she proposed.⁸ Whatever merit and interest such strategies might have in the context of a philosophy seminar, they are damaging from a political point of view, because they suggest that the right to an abortion can be grounded on nothing better than a position that seems, *prima facie*, implausible: that someone's right to privacy or autonomy can in some cases outweigh the value of a human life.

Thomson's line of argument shows that the debate is not settled even by an affirmative answer to the question of whether abortion takes a human life. The complexity of the issues guarantees this. It is in fact not hard to think of other cases where the value of human life is said to be outweighed by various considerations. (Think of the 3,600 prisoners on death row in the United States, or the 100,000 Iraqis killed in the 1991 Persian Gulf War.) So perhaps there is some principle, such as the right to privacy, by which we could justify the annual death of some 45 million unborn human beings worldwide. But this is surely the last line of defense. Surely a defense of abortion should begin by insisting on the absurdity of treating a newly formed embryo as a human being in the first place.

Another way of dealing with the simple argument against abortion is to refuse to take a position on the question of when human life begins. Harry Blackmun followed this route in *Roe v. Wade*, remarking that since medi-

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cine, philosophy, and theology are unable to reach a consensus, “the judiciary, at this point in the development of man’s knowledge, is not in a position to speculate as to the answer” (Shapiro 1995, p. 64). The work of John Rawls suggests a more general philosophical justification for this approach. He advocates that, in formulating a theory of justice, we “try, so far as we can, to avoid disputed philosophical, as well as disputed moral and religious, questions.” Rawls’s approach “stays on the surface” inasmuch as he attempts to formulate a political conception independent of any deeper metaphysical or theological views (Rawls 1985, p. 230). Yet how can we hope to reach any conclusions about abortion without considering that many regard it as murder? Here abortion-rights proponents seem willfully oblivious to the strength of their opponents’ position. If we truly were to leave in doubt the question of whether embryos are human beings, could we still defend the right to an abortion? In other contexts we go to enormous lengths to prevent even the risk of loss of life. We build cars, planes, and buildings on the assumption that even the slightest risks to life warrant enormous expenses. Hospitals spend thousands of dollars to rule out remote chances of illness. Should we not place a similar value on human embryos, if there is even a *possibility* that they too might be human beings?

If one takes seriously the idea that human life begins at conception, then it can come to seem surprising that the pro-life movement has not been even fiercer. As activists like to point out, the worst atrocities of history have been justified by denying the humanity of other groups. A former member of a Nazi police battalion remarks that “the Jew was not acknowledged by us to be a human being” (Goldhagen 1996, p. 280). According to an American veteran of the Vietnam War, “it wasn’t like they were humans. . . . And when you shot someone you didn’t think you were shooting at a human. They were a gook or a Commie and it was okay” (Bourke 1999, p. 193). Other cases are easy to come by. Imagine deciding on the morality of slavery while leaving open the question of whether slaves are human beings. If abortion takes a human life, and if bombing an abortion clinic could stop people from having abortions, then such behavior would seem to be no worse than that of radical abolitionists in the nineteenth century. It was wishful thinking for Blackmun to insist in *Roe v. Wade* that “we need not resolve the difficult question of when life begins” (p. 64). By putting the question on hold, the Supreme Court implicitly concluded that abortion does not take a human life. If the Court had taken seriously the possibility that human life begins at conception, it never could have reasoned in the way it did.⁹

Even philosophers who have taken a more direct approach in defending abortion rights have typically granted that human life begins at conception, and then distinguished *being human* and *being a person*. A fertilized cell counts as human, inasmuch as it contains a human genetic code, but it is not yet a person, and so does not yet have the moral status of a full-fledged human person. (Typically, on this approach, being a person

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requires being able to function at a certain intellectual level. Thus even newborns may not count as persons, and the same arguments that justify abortion may justify infanticide (see, e.g., Tooley 1972, 1983). Although there is scant basis in ordinary language for the distinction between persons and human beings, the distinction has a venerable philosophical lineage, in John Locke's writing on personal identity (*Essay* II.27) and, well before then, in Boethius's definition of a person as "an individual substance of a rational nature" (*Contra Eutychen*, ch. 3), a definition calculated to include not just human beings but also the Persons of the Trinity. In the present context, the distinction amounts to giving with one hand, taking away with the other: one concedes that at conception something is formed that we can call human, then one immediately adds that its being human does not give it the rights that we allocate to mature human beings.

The strategies just described either neglect the force of the supposition that fetuses are human persons or else in blunting that supposition manage to put abortion on the same footing as infanticide. Views of the latter sort strike me as exhibiting a peculiar moral deafness, symptomatic of positions taken under intense ideological pressure. Aquinas's account offers a much more direct and attractive approach. Early abortions are not murder, for Aquinas, because actual human life does not begin until well after conception. The developing fetus does not count as a human being until it possesses a human soul, and this does not occur until the fetus has developed its brain and sensory systems to the point where it can support the distinctive intellectual capacities of a human being. This point comes, he plausibly contends, somewhere in the middle of a fetus's development. There is no need for subtle metaphysical distinctions between persons and human beings, and no need for tendentious moral claims about the rights of things that are human but not yet persons. Instead, we can attack the pro-life position at its weakest point: at its claim that an unformed mass of cells can genuinely count as a human being.

Aquinas's views on this subject deserve attention for several reasons, aside from their inherent plausibility. First, Aquinas shares with the pro-life movement many basic theological and philosophical assumptions. By showing how these assumptions lead Aquinas *away* from the view that human life begins at conception, there is some hope of producing an argument that will be persuasive to an audience beyond academic philosophy. Of course, one might question whether this is a topic where either side is genuinely open to persuasion. But here a second reason for looking closely at Aquinas becomes important. As the *Doctor communis*, Aquinas has a kind of authority no Ivy League Ph.D. can match. His enduring status within Catholicism assures him of respectful attention from at least one segment of the pro-life movement. Where such respect exists, there is at least the chance that arguments may persuade.

Aquinas's thinking about when life begins is shaped by his view that material beings have life in virtue of having a soul (§1.1), and that human

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beings are made human by having a specifically human or rational soul. Because he takes this rational soul to be something nonphysical, he argues that it cannot be generated by purely biological means, through sexual reproduction. The basis for this last claim is quite straightforward: "It is impossible for the active power in matter to extend its action to producing an immaterial effect" (118.2c). In other words, no matter how semen acts on the material inside the uterus, there is no way that such material causes can have effects that transcend matter. Consequently, the rational soul must be brought into existence by some sort of nonphysical agent. The only possibility Aquinas finds plausible is that the soul is created by God, and infused into the human body.

Aquinas is much more likely, on these points, to get a sympathetic hearing from the pro-life movement than from contemporary philosophers. In other contexts, it is important to show how much of Aquinas's soul-talk can be given a perfectly respectable interpretation in contemporary terms.¹⁰ But in the present context there is no reason to shy away from the theological assumptions, since those assumptions are part of what will make the account plausible to the intended audience. So let us grant, for the sake of argument, that human beings have an immaterial soul created directly by God. It is striking how this view, when taken seriously, removes much of the impetus for holding that human life begins at conception. If the rational soul is not a product of sperm meeting egg, then why should we suppose that it comes into existence at conception? Presumably, God can create and infuse the human soul whenever he likes. So why would he choose conception as the appropriate time? Why not before conception? Why not after? The moment of conception seems an arbitrary choice.

Modern proponents of what I call the moment-of-conception thesis like to appeal to science in defense of their approach, especially to the presence from conception of the human genetic code. A 1987 Church document invokes recent biological findings in support of the view that "in the zygote resulting from fertilization the biological identity of a new human individual is already constituted." The authors then ask, "How could a human individual not be a human person?" (Sacred Congregation 1987, pt. I sec. 1). Strangely, this sort of argument relies implicitly on the sort of reductive materialism that one would expect to be anathema to the pro-life movement. If to be human is to have a God-given soul, then the presence of the human genetic code at conception shows nothing about whether the embryo is a human being.

From Aquinas's perspective it is a simple matter to distinguish "biological identity" from "personal identity." Until the fetus has a human soul, it is not a human being, no matter what the underlying biology looks like. One often hears it said that, though Aquinas's metaphysics may be sound, his science is out of date.¹¹ But it is not at all clear how recent developments would change Aquinas's mind. We have seen (§4.1) that he postulates something very much like a genetic code, a *virtus formativa* present

Catholic teaching

Aquinas scarcely bothers to argue against the view that human life begins at the moment of conception. Indeed, hardly anyone in the medieval era took the thesis seriously. St. Anselm (1033–1109) remarked that “no one with any sense accepts the view than an infant has a rational soul from the moment of conception” (*De conceptu virginali*, ch. 7). In a careful survey of thirteenth-century authors, Richard Dales (1995) finds only two advocates for the moment-of-conception thesis: Robert Grosseteste and a manuscript of unknown authorship (pp. 57, 165).

Matters began to change in the modern period. Scientists armed with microscopes (examining, among other things, the fetuses of dead animals) imagined that they could see tiny, fully formed animals just a few days after conception. For a while, the dominant view was that potential offspring must exist preformed within female ova (precisely the opposite of Aristotle’s view). But with the discovery of spermatozoa within semen, the male role again began to appear dominant, and scientists such as Leeuwenhoek defended preformation from the opposite side, supposing that each sperm contains a tiny human being. The poor quality of early microscopes, combined with false expectations about what ought to be visible, led seventeenth-century scientists down many such false paths (see Wilson 1995, ch. 4).

These misconceptions made it seem credible that human life begins at conception (or even earlier?) and it was at this time that a few Church theologians, such as Thomas Fienus and Paulo Zacchia, began to hold that view. Still, it wasn’t until the nineteenth century that the thesis became prevalent within the Church, this time as an indirect result of scientific developments. Advances in medicine made abortions increasingly safe and common; this was viewed, in the words of G.R. Dunstan (1984), as “a moral threat calling for drastic remedy” (p. 42). The pivotal moment came in 1869, when Pope Pius IX eliminated the Church’s long-held distinction between an animated and an unanimated fetus and ruled that all abortions were subject to excommunication. (For the whole history, see Connery 1977.)

Officially, the Church has never taken a position on the philosophical question of when human life begins. In a recent encyclical, John Paul II notes that the Church has not “expressly committed itself” on the moment when human life begins (1995, ch. 3 sec. 60). But the Church’s rhetoric leaves little room for doubt. In that same encyclical, the Pope writes that abortion “destroys the life of a human being” and “directly violates the divine commandment ‘You shall not kill’” (1995, ch. 1 sec. 13). That seems fairly express.

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from conception whose precise task is to determine the “biological identity” of the developing organism. And though modern science would of course allow Aquinas to revise and expand this account, his basic picture of the process is not so different from ours.

Of course, such appeals to science are not what drive the pro-life movement (any more than it is what drives the pro-choice movement). The moment-of-conception thesis seems generally to be motivated by the belief that an embryo, from conception, has a human soul. Now it might seem that there is no hope of deciding the question of when a person’s soul is created. If this question could not be answered, then that itself might give some encouragement to the pro-life cause, because our interest in minimizing the risk of taking a human life might then lead us to condemn abortion in all cases.¹² But Aquinas believes we can say in at least rough terms when the human soul is infused: it is infused at that point when the fetus is sufficiently developed, in its brain and sensory systems, to support the soul’s intellectual operations. Aquinas himself does not insist on any definite time frame for this development.¹³ But modern embryology has established that the parts of the brain responsible for higher-level thought processes are not active until after the midpoint of gestation. Before this point, the brain stem can produce simple reflex motions (from around the eighth week), but the mechanisms for awareness and abstract thought are not yet in place. There remains some uncertainty about the precise timetable for higher-level brain development. But it is quite clear that these events occur after the twentieth week of gestation, by which point the vast majority of abortions have occurred.¹⁴

Why should there be a necessary link between brain activity and the soul’s infusion? Even if we agree that there is no reason to believe God infuses the rational soul at conception, why should we follow Aquinas in believing that God waits until the brain has sufficiently developed? His argument depends on his hylomorphic conception of the soul-body relationship. Just as a form requires the appropriate sort of matter – one cannot make a good copy of a Rodin sculpture out of cardboard – so the human soul requires the appropriate sort of body. To the suggestion that the human soul might be present from the very start of the generative process, within the semen’s *virtus formativa*, Aquinas replies:

It cannot be said that the soul, in its complete essence, is in the semen from the beginning and that its operations do not appear because of the lack of organs. For since the soul is united to the body as its form, it is united only to a body of which it is appropriately the actuality. But the soul is the actuality of a body with organs. Therefore the soul does not actually exist in the semen before the body develops its organs, but is there only potentially or virtually (*SCG* II.89.1737).

These words apply not just to the human soul, but to the souls of other living things. And it is easy to see Aquinas’s point if one considers the nutritive or sensory souls. The various parts of the sensory soul, such as

Qwyckening

It is often reported that Aquinas takes human life to begin at quickening, the point at which the fetus begins noticeably to move within the uterus. (This comes around the twentieth week of pregnancy.) This is mostly a misunderstanding. According to Aquinas, the rational soul is not what makes such movement possible; the capacity for movement is present in the fetus before the rational soul is infused. So there is no reason the fetus could not move before the arrival of the rational soul; conversely, quickening might occur well after the rational soul's infusion.

But there is a kernel of truth here. The English 'quicken' descends from Germanic words that mean *coming to life*. Its core meaning, according to the *Oxford English Dictionary*, is "to give or restore life to; to make alive; to vivify or revive; to animate (as the soul the body)." Early English abortion law used the term 'quicken' as a translation of the Latin *animatus*, but that core meaning was in time forgotten (see Connery 1977, ch. 11).

In the literal sense, then, Aquinas does believe that the fetus becomes human at the moment of quickening. This literal sense has much to recommend it. It is a shame that there is no word in English that effectively captures the sense of the Greek *psuchê* or the Latin *anima*, both of which are closely tied to the idea of *living* (see **Anima**, p. 27). Instead of 'soul,' which has many of the wrong connotations, we might have had the good fortune of being able to use 'quick.' We could then speak not just of cutting a person to the quick, but of the quick's immortality, and the powers of the quick. On Aristotle's behalf, we could abandon the obscure Latin title *De anima* for something far more vivid: *On the Quick*. It would be a bestseller.

the power of sight, just are the capacities of various bodily organs. So without the appropriate organs, there can be no sensory soul, and the same holds true for the nutritive soul. But this argument does not seem applicable to the rational soul, because its powers operate independently of the body: "the soul's intellectual power is not the power of any corporeal organ, in the way that visual power is the actuality of the eye" (76.1 ad 1). Here the form-matter argument seems to fall apart, because the mind does not require any sort of physical organ. It seems that God might infuse the rational soul at the very start of the generative process, well before any sensory or neurological development gets under way.

Yet Aquinas thinks that even the intellectual soul needs a certain sort of body. For although the intellect is metaphysically independent of the body (§2.2), and must be independent if it is to survive death (see §12.1), it still needs the body in order to operate. This becomes clear in 76.5, where

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Aquinas asks, “What sort of body should have the intellectual soul as its form?” It might seem that the intellectual soul needs no body at all: after all, the intellect is “not a body,” does not operate “through a bodily organ” (75.2c), and is not even the actuality of the body (76.1 ad 2–3). But the intellect nevertheless needs a body as its instrument, because of the way in which it operates:

The intellectual soul holds the lowest rank among intellectual substances, in terms of natural order. This is so inasmuch as it does not have knowledge of the truth naturally given to it, in the way that angels do. Instead, it must accumulate such knowledge from divisible things, through sensory means (76.5c).

If the human mind worked like an angelic mind, then there would be no need for it to be united to a body (§§10.4 and 10.5). Indeed, Aquinas believes that at death the human soul will be separated from the body, and will at that point begin to function much like an angel (§12.3). But in this life human beings are subject to an empirical constraint: we must acquire our information through the senses (§10.2). The human mind is entirely powerless without those senses; it begins as a blank slate (84.3sc) and would stay that way if not for the sensory information it receives from phantasms. So for the human mind to operate at all, in this life, it must be attached to the right sort of body.

When it comes to what is necessary, nature neglects nothing. For this reason the intellectual soul needed to have not only a power for intellectually cognizing, but also a power for sensing. But sensory action does not occur without a corporeal instrument. Therefore the intellectual soul needed to be united to a body of the sort that could serve as an appropriate organ for sensation (76.5c).

Below we will see the full extent of this constraint. It entails that the mind needs not just the five external senses (§6.3), but also the so-called internal senses of memory (§9.3), imagination (§9.3 and 9.4), common sense (§6.4), and the cogitative power (§8.4). These in turn require a developed brain: not just any brain, but a powerful human brain that can go beyond the crude operations of lower animals. Without these physical capacities, the mind would be unable to function.¹⁵ At a minimum, it would be pointless for God to infuse the human soul at any earlier point.

The sheer pointlessness of such an act is itself an argument against that possibility, because Aquinas believes that “nothing is idle or pointless in nature” (88.1 obj. 4). Aquinas wants to go further, however, and argue not just that it would be pointless, but that it is *impossible* for the rational soul to be infused at the moment of conception. Thus he argues above that “it *cannot* be said that the soul, in its complete essence, is in the semen from the beginning and that its operations do not appear because of the lack of organs” (SCG II.89.1737). The difficulty is not in the idea that God might infuse an intellect into an embryo, or a dog, or even a stone. He could do so, just as he creates separate intellects that are not located in any matter at all. (To give an intellect to something without senses, God would have

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to provide that intellect with information. Thus the angels are illuminated by one another and by God, and our souls will share in this illumination after death (§12.2.) But Aquinas wants to contend that not even God could make a rational soul be the *form* of an embryo, or a dog, or a stone.

This conclusion follows from Aquinas's metaphysics of soul. If the soul were merely an immaterial mind, something that might be located within any given parcel of matter,¹⁶ then there really would be no way of saying when it is infused. But Aquinas conceives of the soul as a certain kind of form, a substantial form. And one way of identifying substantial forms is as follows:

A substantial form gives existence unconditionally. So something is said to be generated unconditionally through its addition and, through its removal, to be corrupted unconditionally (76.4c; see §3.2).

This is to say that a substantial form is what makes a thing exist as the sort of thing it is. A substantial form does not merely give a thing one property among many, but gives a thing its very identity, its very existence.

Could this, even conceivably, occur at conception, within a single-cell embryo? That depends on what one means by a human being. Aquinas accepts the classical definition, *rational animal*. This definition entails, first, that a human being must have those capacities that are definitive of being an animal, including the capacities for sensation, emotion, desire, and memory (§2.1). Aquinas takes it as obvious that these capacities require the right sort of body. So without such a body, God could not infuse the human

Corpus Christi

Christians believe that Jesus Christ was God incarnate, God made man. On special theological grounds, Christ's human soul was held to have been infused from the moment of conception. St. Maximus (c. 580–662) thought that it would not do to make this case an isolated exception, and so he held that the rational soul is always infused at conception (see Connery 1977, p. 52, citing *Ambiguorum liber*, pp. 1339–42). For Aquinas, in contrast, Christ is the exception that proves the rule. Aquinas argues that Christ's soul could have been infused at conception only if his body had been complete from the start: "a soul requires the appropriate matter, as does every other natural form. But the appropriate matter of a soul is a body with organs. . . . Therefore if the soul were united to the body from the beginning of conception . . . then it would be necessary for the body from the beginning of conception to be given organs and form" (*SCG* IV.44.3814). This, he argues, is what must have happened with the body of Christ.

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soul. To be a human animal requires something further, reasoning or thinking (§§10.4 and 10.5). Aquinas refuses to identify the soul with the capacity for reason (§5.2), but he insists that this capacity is necessary: anything with a human soul must have the capacity for thought.

Of course, *having the capacity* can mean many things. But Aquinas's reasoning requires that the capacity in question here be capacity *in hand*. He follows the lead of Aristotle's metaphor: "the soul is like sight and the potential of a tool" (*De an.* II 1, 413a1). A hammer has the capacity to drive nails, and it has this capacity regardless of whether it is actually doing so. We might also say that the wooden handle and the metal head, unassembled, have the capacity to drive nails. But that is not a hammer. That sort of unassembled potentiality is the wrong sort: it is pure potentiality, analogous to what the body has before the soul is introduced. The soul gives a thing potentiality right now:

An object is said to be something *potentially* in two ways: in one way when it does not possess the principle of its operation; in a second way when it does possess that principle but is not functioning in accord with it. But a body whose actuality is soul has life in potentiality in the second way, not the first (*InDA* II.2.106–11).

Souls, in general, give things life and the capacity to perform the operations of life. To live a human life, one must have the capacity in hand to think.

Aquinas's view on these matters is not widely known. Those who do know are generally not eager to advertise it, and indeed have often attacked it in scholarly circles. Norman Ford (1988) makes the most common criticism when he contends, against Aquinas, that the rational soul may be infused from very close to the time of conception,¹⁷ as soon as there is "the natural potential to develop and acquire such a capacity [for rationality]." Only this sort of "first actualization" is required:

We may question whether a human being need necessarily have acquired the second actualization of the intellective soul which would consist in actually exercising rational activities (pp. 42–43).

Ford is, of course, right that one can have a rational soul without presently using it. But he skips right past the level of potential that Aquinas regards as crucial. Having a rational soul entails neither a remote "potential to develop . . . such a capacity" nor "actually exercising rational activities." It entails something in between, having the capacity itself, in hand. For Aquinas, a rational soul must have such capacity for thought. Until that capacity is present, the rational soul cannot – by definition – be present.¹⁸

To suppose that the human soul comes into existence at the moment of conception is to endorse, at least implicitly, a highly Cartesian conception of the soul.¹⁹ This moment-of-conception thesis can seem plausible, in other words, only if one endorses the following two claims:

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- The soul stands apart as an independent substance, housed within the body but not united to the body.
- Human beings just are their souls, housed within a body.

As preceding chapters have shown in detail, Aquinas rejects both of these claims. In place of what he thinks of as Platonic dualism, he attempts, in Aristotelian terms, to unify soul and body through his conception of the rational soul as a substantial form (see §3.3). In place of a one-sided emphasis on soul, Aquinas stresses the bodily component of human nature: “It is clear that a human being is not soul alone, but something composed of soul and body” (75.4c; see §2.1). Human beings do more than just think – they have, in particular, sensations and emotions – and so one cannot dismiss the body as merely an incidental appendage. (These remarks raise serious questions about the status of the soul after death, apart from its body; see Chapter 12 for discussion.)

In appealing to the presence of a human soul from the moment of conception, pro-life activists are committed to more than just an implausible account of the soul-body relationship. There are further implications here, ones that Plato embraced, but that would be an embarrassment to the pro-life movement. For if there are no limits on the kind of body that can serve as a subject of the human soul, then there is no reason to suppose that God waits until conception to create such souls. In other words, it is not just that the moment-of-conception thesis lacks a basis for thinking that human beings come into existence so soon. They also, embarrassingly, lack a basis for supposing that human beings come into existence so late. If the human soul can exist without an appropriately organized body, then why couldn’t human souls exist without any body at all, before the moment of conception?

Aquinas argues at length against the preexistence of the human soul. He cannot help but take this possibility seriously, given that so many earlier thinkers had embraced it. Although we now think of Christianity as firmly committed to the soul’s coming into existence when the body does, matters were not always so clear. Origen (185–253) held that human souls preexisted their bodies and were forced into them as a form of punishment (*SCG* II.83–84). Augustine, too, at least tentatively defended the idea that our souls might have existed before their current earthly incarnation. At *Confessions* I.vi.7 he writes, “I do not know, Lord, where I came here from, into this dying life, as I call it, or living death.” Origen’s view was condemned by the Church in the sixth century, but it is not obvious that this condemnation would extend to all views on which the soul preexisted the body. Contrary to what we might assume, the issue of the soul’s preexistence seems to be surprisingly open, even within Christianity.²⁰

Aquinas’s chief argument against the soul’s preexistence rests on the claim that God would not create a human soul except as the form of a human body. In *QDP* 3.10c, he reasons as follows:

Luck of the draw

Origen believed that souls are infused into particular bodies as a punishment for their past misdeeds. He felt there would be something unfair about God's simply assigning souls at random. Aquinas expresses Origen's point as follows:

God does all things in accord with justice. But things that are different and unequal are given only to those in whom there is some preexisting inequality of merit. Yet in the birth of human beings there is considerable inequality with regard to souls: some souls are united to bodies suited to their soul's operations, some to bodies unsuited; some are born to the irreligious, some to the religious, and the latter are saved through receiving the sacraments. So there seems, therefore, to be some preceding inequality of merit in souls, and hence it seems that souls existed before bodies (*QDP* 3.10 obj. 15).

The random luck of the draw would be so unfair!

In reply, Aquinas does not take issue with the role of luck in shaping our nature and therefore our lives. But he does clarify the source of this luck. It stems not from what sort of soul we receive, exactly, but from what sort of matter that soul informs. "Forms are infused by God in keeping with the merit of the matter" (ad 15). This means, in modern terms, that luck stems from inherited biological traits. Inequalities are not directly attributable to God. (For further discussion, see §12.3.)

Still, God must at some point bear some responsibility for such inequality. So Aquinas needs a further reply: he goes on to take issue with the objection's understanding of what justice requires. Justice requires returning what is owed. But God owes us nothing; he gives us life of his own free choosing. We should therefore be happy with what we have, rather than glancing enviously at what the next person got.

1. God creates things only as they are naturally complete.
 2. The human soul is not naturally complete outside the body, because the soul is just a part of a complete human being. (This is the anti-Platonist premise.)
- ∴ 3. God does not create the human soul outside the body.

Aquinas supposes that no one would deny the first premise, at least not on reflection. Biological reproduction may go through a series of incomplete stages on its way to a fully developed organism, but surely this is not how God *creates* things. What God creates, God makes perfect from the start. God would therefore not create the soul in an imperfect state. Aquinas thus infers that those who defended the soul's preexistence denied the second premise, and so shared Plato's assumption that "a human being is not

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composed from soul and body, but is the soul, using a body” (*QDP* 3.10c). The full reason why Plato is mistaken at this point will not be evident until we consider Plato’s epistemology (§10.2). For now we need notice only that the moment-of-conception thesis takes us down the same road that Plato goes down. Once one allows that the human soul could exist from the moment of conception, there is little reason not to follow Plato all the way, and to hold that the soul not only survives the body’s death but also precedes its birth.

I have been focusing on the relative plausibility of Aquinas’s account versus the moment-of-conception thesis. The implausibility of the latter makes it easier to defend Aquinas. But it is not so easy to defend Aquinas against those who agree that human beings emerge only at a certain state of fetal development. Some recent authors have shared Aquinas’s focus on neural development, and yet reached different conclusions about when human beings (or persons) come into existence. Some have suggested that a human being exists from around the eighth week, when the brain stem begins to trigger bodily motions (Brody 1975, Lockwood 1985, Tauer 1985). This isn’t an attractive position if one follows Aquinas in supposing that human beings must have the capacity in hand for rationality. More attractive would be to push the beginnings of human life to a later date, even past birth. For if rationality in hand is required, then it may seem that mid-gestation is absurdly early. In what sense is a twenty-some-week fetus rational, or potentially rational? There is of course the distant sort of potentiality that Aquinas calls second potentiality, but that is present from the moment of conception, if not earlier. If the test is having the capacity in hand to be rational, then it looks as if we will be driven to the impalatable conclusion discussed earlier (and defended by many philosophers): that not even a newborn is truly a full-fledged person.

To explain how Aquinas would handle this line of argument, I need to anticipate a claim I develop more fully in Chapter 10. Until now, I have been speaking indifferently of rationality, intellect, mind, and thought, without clarifying what exactly makes human beings special (and worthy of special moral consideration). But Aquinas is quite clear that what makes human beings special, among animals, is not rationality but rather our ability for conceptual thought. This is the special capacity of an immaterial mind. It is a capacity that is most clearly displayed in communication, but surely it is present in children before that point. In fact, though Aquinas is never explicit on this point, it is evidently his view that a late-term fetus is already engaged in conceptual thought. Before the rational soul is infused, the fetus has no mind with which to conceptualize. Before the brain has developed, conceptualization is not possible anyway. But once the rational soul is infused, Aquinas believes that this newly human fetus *immediately* begins to use its mind. (Evidently, the fetus receives enough sensory stimulus to set the intellect in motion.) So though a newborn child is, to all appearances, less intellectually developed than a cat or a pig,

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Aquinas would insist that appearances are misleading. That child has been using its mind ever since it first was created.

Here Aquinas's theory rests on a controversial empirical claim: that at some point around mid-gestation, a fetus begins to engage in a cognitive activity fundamentally distinct from and superior to the sorts of cognitive activities that nonrational animals engage in. (On the precise nature of this activity, see §10.4.) Though susceptible to verification in principle, this claim is not easily tested in practice. Moreover, I think the claim is not one that can be plausibly defended today, for two reasons.

- First, the claim rests on the supposition that the human intellect is infused all at once by God. But Aquinas believes this because he believes that the intellect is immaterial, and I have been unable to sustain his argument for that conclusion (see §2.2).
- Second, the claim rests on the supposition that the brain has sufficiently developed by around mid-gestation to support the operations of intellect. Though Aquinas does not commit to a specific time frame (see note 13), he clearly believes this occurs well before birth. Modern science puts that in doubt. Although the basic structures of the brain come together around mid-gestation, most of the brain's development has yet to take place. In fact, the bulk of the brain's internal wiring is not complete until after birth.²¹ So even if we are persuaded that the mind is immaterial, it is not at all clear that the brain of a fetus (or even an infant) has developed enough to support the intellect's conceptual work.

In light of these difficulties, I think that Aquinas's account does not decisively refute those who propose a much later date for full-fledged personhood. It is plausible to think that the capacity for conceptualization – actually having the capacity in hand – does not come until some time after birth, and if that is right, then by Aquinas's own lights it would follow that the organism takes on a rational soul and hence becomes a human being only at that late date.

But there is more to be said. Aquinas himself must have realized, at least tacitly, the threat his view faced from this direction. Nothing could be more obvious than that a newborn does not appear to have the capacity for intellectual thought. So why does Aquinas reject all appearances in favor of an earlier date for ensoulment? Although he does not pursue the issues this far, it seems to me that his view can be understood as follows. The question of when the developing fetus or infant begins to use intellect (or takes on a rational soul) is uncertain, given his (and our) limited knowledge of developmental neurology.²² In the face of this uncertainty, Aquinas takes a conservative stance. Rather than waiting until the developing child has fully demonstrated a capacity for conceptualization, Aquinas takes the beginning of human life as the point where the fetus first conceivably has that potential. Whether a fetus is genuinely engaging in conceptual thought is a dubious matter, but Aquinas gives that fetus the benefit of the doubt, pushing the beginnings of human life as far

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back as he can while remaining consistent with his broader theory of the soul.

In light of this uncertainty, Aquinas's approach has much to recommend it. His sense of respect for human life leads him to frame his account as generously as possible, to count within the species even those who are taking the first tiny steps toward full intellectual proficiency. Aquinas includes within the scope of *human being* even those who have not yet achieved full rationality (infants) or who may never do so (the severely retarded), just so long as they have the bare potential in hand to make the opening moves. His policy is like that of a union that protects all of its members, apprentice and skilled craftsman alike. Of course, the first operations of intellect will be feeble and inchoate, far too primitive to break the surface and manifest themselves in behavior. Still, even the least developed and most defective of us does something that no other animal can do.²³

Our own sense of respect for human life should lead us to endorse something like Aquinas's account. On one hand, it is surely absurd to think that a few unformed cells count as a human being. On the other hand, it strikes us as appalling to claim that newborns and late-term fetuses are not genuinely human beings (or persons). There seem to have been societies that were not appalled by such claims (ancient Rome is often cited). Moreover, such claims would be consistent with Aquinas's metaphysics, on a stringent account of when we acquire the capacity for conceptualization. But Aquinas's approach is more generous, more inclusive, more concerned with protecting human life from the earliest reasonable point.

Our society shares these values. So unless we hope to bring about a wholesale revision in moral outlook (as some philosophers clearly do), we need to identify a moderate approach, something that would explain the widespread intuition that early abortions do not take a human life whereas late abortions do. Aquinas offers us a principled and specific test for evaluating the status of a fetus, rooted in the commonplace view that our minds are what distinguish us from other animals. If we accept this test, we can conclude that the vast majority of abortions, though they may be unfortunate and perhaps even immoral, are not tantamount to murder.

4.3. Identity and discontinuity

Arguments for the moment-of-conception thesis often play fast and loose with descriptions of the embryo and fetus. The claim is, first, that the newly conceived embryo is *human*. That claim then gives way, often without warning, to the further claim that the embryo is a *human being*, which is then taken, often again without warning, to entail that the embryo is a *person*. The progression can seem irresistible. Surely what is conceived is a *human* embryo, not that of a dog, cat, or wolf. But if it is human, then it must be a human being, and if it is a human being, then how can it not be a person?

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On Aquinas's analysis, the trouble comes in the move from *human* to *human being*. Although there is nothing wrong with characterizing an embryo as *human*, nothing very much follows from this either. We might also say that the Eiffel Tower is a *human* construction. The comparison is not quite just, however, because the human embryo merits its adjective for a different reason. The adjective 'human' indicates not that the embryo is the product of human activity, but that it itself is the sort of thing that becomes a full-grown human being. Embryos are potentially human. Yet this too gets us nowhere, because we might equally speak of *human* sperm and *human* eggs, each of which is also the sort of thing that becomes a human being. Aquinas insists on the distinction between an actual human being and a potential human being, and he analyzes the adjective 'human' in these terms. "The human body, inasmuch as it is in potentiality for the soul . . . is temporally prior to the soul. It is not then actually human, but only potentially" (SCG II.89.1752). On this analysis, it is legitimate to speak of the *human* body, even before the rational soul has been infused. That body is human inasmuch as it is potentially human. But Aquinas warns here against exploiting the adjective as an illegitimate springboard: the body's being *potentially* human does not entail its being *actually* human, if that means an actual human being.

This distinction is often dismissed with the claim, going back to Tertullian (c. 150–c. 230), that to be potentially human just is to be human.²⁴ On its face this scarcely seems credible: when we say that things are *potentially* such and such, we mean that they are *not* such and such, but that they *could* be. Should matters be any different for a human embryo? Perhaps. There are many things that are potentially human beings. Each of the cells of a human body is potentially a human being, inasmuch as each one might be cloned and developed into a full-fledged human being. But an embryo is different, because it actually has a life of its own. Although it is dependent on the woman's body, it nevertheless is a separate entity, an independent substance.²⁵ So an embryo, unlike other things that are potentially human beings, is already a living thing in its own right. This in itself shows nothing. But once we acknowledge the embryo's independent status, we face difficult questions concerning identity over time. To deny that the embryo is a human being requires insisting on a radical break in the biological history of a human organism. My early life, as an embryo, is not really *my life*, insofar as I, the human being, did not exist then. A different, nonhuman substance existed then. This, on its face, seems implausible. Should we not rather say that the same human life (hence the same human being) endures from conception until death? What grounds do we have for postulating radical discontinuity? This is the hard metaphysical question that lies beneath the surface of the ethical dispute.

The familiar Lockean solution to this question distinguishes between human beings and persons. Locke allows that human beings maintain their identity from the beginning to the end of their biological life processes.

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But he proposes a different account of personal identity, requiring ties in consciousness between one temporal stage and another (*Essay* II.27). Discontinuity comes insofar as there will inevitably be changes in personal identity, but the discontinuity is made to seem less radical by Locke's insisting that the same human being endures through all change.

Aquinas does not seek to distinguish personal identity from human identity. "It holds of every human being to be a person insofar as every subsistent thing with a human nature is a person" (3a 16.12 ad 1). His account is in some ways more radical, because he wants to introduce discontinuity even at the level of the human being. He entirely agrees that an embryo should count, almost from the start, as a separate living substance. To be alive, for Aquinas, just is to perform one or more of the various operations associated with life: taking nutrition, growing, reproducing, moving oneself, sensing, thinking. He criticizes the Stoic view that the embryo is merely a part of the mother, alive only in the way that each of the mother's cells and organs are alive. The embryo has its own life inasmuch as it has its own nutritive system, and grows independently of its mother (*QDP* 3.9 ad 9). But this shows only that the embryo has a soul, a nutritive soul. Aquinas contends that the sensory soul comes later, and the rational soul later still. Each time a new soul develops, a new substance comes into existence.

The vegetative soul comes first, when the embryo lives the life of a plant. Then it is corrupted, and a more complete soul follows, at once both nutritive and sensory, and then the embryo lives the life of an animal. But once this is corrupted, the rational soul follows, introduced from without (*SCG* II.89.1745).

Before this final stage we have something that is alive, and something that, in virtue of its potential, merits the adjective 'human.' But only at this last stage do we have a human being.

In this way, Aquinas introduces the discontinuity of substantial change into the development of the fetus. His thinking here is in line with his more general views about generation and corruption. In every case where some complex substance is generated, its development runs through a series of intermediary substances, each with its own substantial form. Animals, for instance, are never generated all at once out of basic elements, but gradually come into existence. "It is clear in the generation of composite things, such as animals, that in between the principle of generation (the semen) and the ultimate form of the complete animal, there are many intermediary generations" (*InGC* I.8.60). The same is true for corruption: "it is not that, once the soul is corrupted, the body of the animal immediately dissolves into its elements: instead, this happens through many intermediary corruptions" (*ibid.*). Aquinas contrasts these complex cases with simple cases, where from start to finish "there appear only two substantial forms, the one that is given up and the one that is taken on" (*QDP* 3.9 ad 9). (Think of generating water out of hydrogen and oxygen.) Of course, human generation fits the complex model. "First the seed appears, then

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the blood, and so on up until the form of the human being or animal" (*QDP* 3.9 ad 9). Although Aquinas never mentions more than five or so different transformations – seed, blood, vegetative soul, sensory soul, rational soul – it seems clear that the actual process involves a much greater number of forms, each one quickly passing. "The loftier a form is, and the more distant from the form of an element, the more intermediary forms there must be by which we gradually come to the ultimate form, and consequently the more intermediary generations" (*SCG* II.89.1745).

Motivating this account are two assumptions about species classification. First, Aquinas takes as axiomatic their *essentiality*. A change in species entails a change in identity: the prior substance must be corrupted, and a new one generated (see §12.4). Second, Aquinas is equally committed to their *rigidity*. A human being has a certain determinate nature; this nature cannot be altered, cannot be diminished or increased.

The substantial being of a thing remains indivisible; every addition and subtraction changes its species. . . . That is why it is impossible for any substantial form to take on more and less (76.4 ad 4).²⁶

Because of these two principles, Aquinas is unwilling to allow that any living thing gradually comes into existence. Whenever there are fundamental changes occurring to the character of the fetus, this must be substantial change. A human being begins at the point of most radical change: when the human mind comes onto the scene.

Aquinas recognizes that there might seem something peculiar about this rapid sequence of coming into and going out of existence. He answers,

there is nothing absurd about an intermediary's being generated and then immediately afterwards being broken off. For these intermediaries do not have a complete species, but are on route toward that species. So they are not generated so as to endure (*SCG* II.89.1744).

In other words, these incomplete substances are intended (by nature) to play a transitional role. We are familiar only with substances that have an enduring, stable existence. But a careful account of the generative process reveals the existence of many ephemeral species, passing into and out of existence in rapid succession.

These details of how Aquinas develops an Aristotelian account of generation and corruption may seem too abstruse to merit a place when discussing issues that matter in the real world. But some such account is required for any philosophical resolution of the abortion problem. Philosophically, the issue of discontinuity is fundamental in deciding whether human life or personhood begins at conception. The proponent of the moment-of-conception model contends that there is no relevant discontinuity, just the gradual growth and development of a human person. Aquinas, in contrast, contends that generation involves constant, radical discontinuity. On his view, the human being that now exists never was an embryo. To destroy an embryo is not to destroy a human being, nor is it

Symmetry

Aquinas gives parallel accounts of coming into existence and going out of existence; as a result, his views about the beginning of life closely match his views about the end of life. This has interesting implications for euthanasia, the other great ethical puzzle concerning the boundaries of human existence.

Aquinas believes that a human being often goes out of existence before all life comes to an end. In that case the rational soul would give way to a merely sensory soul, or even to a merely nutritive (or vegetative) soul. Here we could say that even though life continues, the human being that once existed no longer exists.

In the course of corruption, first the use of reason is lost, but living and breathing remain; then living and breathing go, but a being remains, since it is not corrupted into nothing. . . . When *human being* is removed, *animal* is not removed as a consequence (*InLC* 1.20–21).

This symmetry between Aquinas's account of conception and death is itself an attractive aspect of his view (see Wallace 1994, pp. 189–92). But such symmetry might be developed in various ways. Today, brain death is generally interpreted to mean the complete cessation of all brain functions. That might seem to clash with Aquinas's view that a human being dies when *higher* brain functions cease. But in practice the diagnostic test most often used for brain death is an EEG, which is also the main test used to determine the beginnings of cognitive activity in a fetus. (Fetuses begin to generate EEG readings around the twenty-fifth week of gestation, or even later (Morowitz and Trefil 1992).) So the best modern information on brain functioning, combined with Aquinas's metaphysics, yields an attractive symmetry between the beginning and the end of human life.

even to destroy some entity that will become a human being. Indeed, the ordinary process of generation ensures that the embryo will go out of existence regardless of whether it is aborted. When a new substance comes into existence, the old one goes out of existence: “the generation of one thing is always the corruption of another” (118.2 ad 2). The destruction of an embryo is not even the destruction of a complete, enduring substance. You and I could not have been aborted in the first trimester, because you and I did not exist then. What did exist then, existed only for a transient moment.

This metaphysical result should not be pushed too hard. Immediately after making the remark that generation requires corruption, Aquinas adds

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that in human beings and other animals, “when a more perfect form comes on, the prior is corrupted, but in such a way that the following form has whatever the first had, and still more” (118.2 ad 2). So although there is metaphysical discontinuity, inasmuch as there is substantial change, there is still developmental continuity, inasmuch as the prior substance provides the raw material for the newly generated substance. When the fetus becomes a human being, the thing that did exist (the fetus with a merely sensory soul) is corrupted, but the term ‘corruption’ is misleading if it suggests the fetus is utterly destroyed. It is better to say that the fetus goes out of existence, in the way that a caterpillar goes out of existence when it becomes a butterfly, or in the way that hydrogen and oxygen go out of existence when they become water.

Given this analysis, we can better understand what is morally problematic about abortion. In a world where water is precious, it would be immoral not only to destroy water, but also to destroy the hydrogen and oxygen used to make the water. One need not equate the raw materials with the finished product in order to see the great value of the raw materials. We believe that human life is precious, and so it is entirely appropriate that we value not only living human beings, but also the developing embryos and fetuses that will become human beings. The closer we come to an actual human being, the higher that value rises. (Hence we value human ova, but to a lesser extent, because of their remoteness from the finished product. And we value human sperm, but to a still lesser extent, because of its remoteness and plenitude.) These values are entirely intelligible without appealing to any dubious identification between the embryo and a human being. As many commentators have remarked (most notably Ronald Dworkin 1993), the pro-life movement would be far better served by appealing to our sense of the precious character of human life. When something is precious, we protect not only actual instances, but potential instances.²⁷

If the debate were refocused in this way, we might then confront an issue that inevitably we must confront, and the sooner the better. As Aquinas says, “the generation of one thing is the corruption of another.” We value human life, but we value other things as well, such as the quality of that life, the lives of future generations, the lives of other animals, the health of the environment. At a time when the planet was underpopulated, natural resources were plentiful, and human lives were frail, there would have been no reason to question the value of human life. But matters are no longer so clear, and we now need to think hard about exactly how to weigh the value of human life. John Paul II (1995) speaks of “the incomparable value of every human person” and “the inestimable value of human life,” but we have reached the point where this sort of rhetoric should be questioned. We can no longer afford not to weigh the value of human life, and in making such estimates, we will be forced into comparisons and trade-offs.

4.4. The plurality of forms debate

Aquinas's Aristotelian account of fetal development furnished his opponents with one of the most effective lines of argument against his broader metaphysics of soul. On Aquinas's account, as we have seen, the rational soul is the body's only soul and its only substantial form. When the rational soul is infused, the prior soul gives way; this must be the case, Aquinas believes, because in all cases "one thing has just one substantial form" (76.4sc). It is easy to see how the Aristotelian account of fetal development could be used to raise difficulties. Because an embryo first has a nutritive soul, then a sensory soul, and finally (seemingly on top of all) a rational soul, it looks as if a human being should have three different souls. In Aquinas's most detailed discussion of whether a human being has more than one soul (*QDA* 11), the first ten objections raise the same problem in various ways. The basic line of argument gets summarized in 76.3 obj. 3:

The Philosopher says in *The Generation of Animals* that an embryo is an animal before it is a human being. But this could not be the case if the sensory and intellective souls had the same essence, since it is an animal through the sensory soul and a human being through the intellective soul. Therefore in human beings the sensory and intellective souls do not have a single essence.

The Aristotelian account seems to pile soul on top of soul, suggesting that the ultimate product, a human being, must contain multiple souls. Aquinas's brief reply notes merely that, on his view, there can be no question of multiple souls, because the prior sensory form is cast off (*abicta*) when the rational soul is infused.

An embryo first has a soul that is merely sensory. Once that is cast off, a more complete soul appears, one that is at the same time sensory and intellective (76.3 ad 3).

This understanding of fetal development is entailed by his commitment to the principles *one substance: one substantial form* (76.4) and to its special case: *one living being: one soul* (76.3).

By many accounts, the unicity-of-form doctrine was the single most controversial tenet of Aquinas's entire career. No earlier scholastic had defended the doctrine, and many later scholastics would strongly take issue. Peter John Olivi (1247/8–1298) called the doctrine a "brutal error."²⁸ John Pecham is reported to have publicly confronted Aquinas on this issue. According to one report,

However much Brother John exasperated Brother Thomas with bombastic, pompous words, still Brother Thomas never let go of his humility, but always replied gently and kindly.²⁹

Just as one would expect from a saint.

But was St. Thomas right? We saw in §4.3 why he postulates substantial change at the point where the rational soul is infused. This claim was not controversial. What was controversial, among Aquinas's contempo-

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ries, was his claim that when a new substantial form is introduced, all prior forms are corrupted. The Treatise argues for this thesis in two closely related articles

76.3. Does a body whose form is the intellective principle have any other soul?

76.4. Is there any other substantial form in such a body?

In each case, his answer is negative. Strictly speaking, only the second of these articles was controversial among Aquinas's contemporaries. Aquinas credits Plato with ascribing multiple souls to human beings (76.3c), but this was not a view that Christian philosophers found attractive.³⁰ Still, although there was agreement that a human being has only one soul, a rational soul, the details of Aquinas's own account were highly controversial, because of his insistence that the rational soul is a human being's only substantial form. Aquinas's opponents avoided speaking of the corporeal, nutritive, sensory, and rational as different souls, but still they spoke of these different parts of the soul as different *forms*, and they objected to Aquinas's claim that these different parts were corrupted when the rational soul is infused.

Aquinas frames the argument of 76.3 in such a way as to implicate his contemporary opponents, regardless of whether they officially believe a human being has multiple souls. Aquinas is in fact so preoccupied with his living opponents that he lets Plato off the hook:

Plato claimed that within a single body there are different souls. . . . Plato's view certainly could be upheld if one were to suppose that the soul is united to the body not as its form, but as its mover – as Plato did suppose. For nothing absurd follows if different movers move the same moveable object, especially if they do so in respect of different parts. (76.3c).

Aquinas has already argued, in 76.1c, against the mover-moved conception of the soul-body relationship (§3.1). Here, rather than pile on further difficulties, he allows that, on this way of connecting soul and body, there is nothing wrong with postulating multiple souls. The problem comes not with Plato's way of doing things, but with the hybrid approach that tries to combine this Platonic approach with the Aristotelian analysis of soul as form. Aquinas continues, "But if we suppose that soul is united to body as its form, then it seems entirely impossible for several, essentially different souls to be within one body."

With this remark it becomes clear that Aquinas's real target is those who analyze the soul in terms of a plurality of forms. Here Aquinas focuses on forms that might be called souls (or parts of soul). In 76.4 he broadens his case to cover any sort of plurality of substantial forms.

So the controversy concerns the number of substantial forms that a single substance can possess. But we should look beyond the Aristotelian terminology and consider exactly what it is that the two sides disagree on. It is not at all easy to say. After all, Aquinas and his critics agree on

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analyzing human nature in terms of potentiality and actuality; they agree that the soul provides the actuality; they agree that the rational component of the soul is nonphysical; they agree that the sensory component (somehow) involves physical organs. Aquinas does believe that the rational soul corrupts all prior forms, whereas Pecham and others believe that the rational soul perfects these prior forms. Yet once we see that corruption does not actually mean destruction, but more like reconstitution within a different substance, it remains unclear what this difference really amounts to.

What seems to be in question is how forms, or actualities, are to be individuated. This, I am inclined to say, is not a deep metaphysical question. Aquinas points to ways in which it is easier to account for human nature on his way of individuating the soul, but the disagreement runs no deeper than rival forms of accounting. Both sides ultimately agree on what there is. In this sense, we might say with Hume that these questions of individuation “are to be regarded rather as grammatical than as philosophical difficulties” (*Treatise* I.iv.6).

Still, the grammar of the soul is important, because the way we think about individuating forms says a great deal about the way we think about human nature. The three arguments that Aquinas offers in 76.3c reflect this point. Each of these arguments draws on a conception of human nature that Aquinas holds dear. Each makes the point that to reach this conception of human nature, one must hold the unicity-of-form doctrine.

The first of these arguments appeals to the notion of being one thing unconditionally (*unum simpliciter*). Aquinas notes that a thing’s form makes it *unum simpliciter*, by giving it existence. (See §3.2 for the complex background to this supposition.) What happens, then, when something has another form, in addition to the substantial form that gives it existence? This happens constantly, inasmuch as things always have accidental forms in addition to their substantial forms. But I and my pale complexion are clearly not *unum simpliciter*: witness the fact that I can change that complexion with a day in the sun. If a human being has multiple souls or soul-parts, and each of those souls (or soul-parts) is a form, then a human being will likewise not be *unum simpliciter*, even as regards the properties of being *living*, being an *animal*, and being *human*:

Therefore if a human being were to be *living* through one form (the vegetative soul), an *animal* through another (the sensory soul), and *human* through a third (the rational soul), it would follow that a human being would not be one thing unconditionally (76.3c).

The plurality-of-forms model surrenders the most attractive feature of the hylomorphic account, its ability to unify soul and body.

The second argument is cast in the technical language of *per se* predication. Shorn of that technical apparatus, the argument appeals, most fundamentally, to Aquinas’s conviction that a human being is not just a mind, but essentially a mind within an animal body, a *rational animal* (see §§2.1

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and 4.2). Once the soul is split into different forms, Aquinas sees no way to get this result. Let us grant that my rational soul is what makes me a human being. But a human being is essentially an animal, and so essentially has a sensory soul. How can we explain these facts, once we distinguish the sensory and rational souls, and treat them as separate forms? Our explanation would need to show that there is some kind of relationship between these two forms. To assure that a human being is essentially both rational and animal, Aquinas concludes, "it must be the same form through which something is an animal, and through which something is a human being" (76.3c).

The third argument appeals to how the soul's different operations are interconnected. In subsequent chapters we will see this point stressed time after time: Aquinas does not conceive of thinking, perceiving, and choosing as operations belonging to a single part of the soul, working in isolation. Instead, the various parts of the soul work in constant, seamless conjunction (see §§6.4, 8.4, 9.2, and 9.4). The present argument establishes these connections from the opposite perspective, stressing the inability of the various parts of the soul to function separately.

One operation of the soul, when intense, impedes another. This could in no way occur if the principle of the actions did not occur through a single essence (76.3c).

It is not, for instance, possible to think about one thing and imagine another. The various parts of the soul work as a single functional unit. (We will see in §9.4 that one cannot think about a thing without, in some sense, imagining it. Again, the various parts of the soul work as a unit.)

None of these three arguments is entirely decisive. In each case, Aquinas's opponents can offer an alternative that preserves human unity, or our essentially animal nature, or our functional coherence. William de la Mare does just this in his widely circulated *Correctivum fratris Thomae* ("Correction of Brother Thomas," c. 1278). In his methodical reply to 76.3 (I.xxxi, pp. 133–34), he handles the first argument by contending that the various forms of a substance are incomplete, and form a unity only when joined together. To the second argument he describes a relationship between forms such that the various secondary forms are part of what is essential about the underlying primary form. He replies to the third argument by appealing to a natural connection (*colligantia*) between the soul's different capacities. None of these replies is very impressive, but the point is that one could tell such a story, in as much detail as one wanted, and thereby preserve the phenomena Aquinas is so intent on saving. To argue over such alternatives is rather like arguing over whether the twin cities of Minneapolis and St. Paul are one city or two. Aquinas stipulates that substances have just one substantial form, composed of various capacities (see §5.2), and this has various effects on his broader account of human nature. One could achieve those same effects by offering some other account. Different accounts are compatible with the same metaphysical situation: that

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a human being is composed of various sorts of actuality, interrelated in complex ways.

So understood, there can be no question of determining which side in this old debate is right. The most we can do, on Aquinas's behalf, is stress the admirable simplicity and elegance of his account, and the way it highlights those features of human nature that he holds dearest.

Excursus metaphysicus: Reality as actuality

The first four chapters have each hinted at a deeper metaphysics that I believe lies implicit in Aquinas's thinking about human nature. On this deeper picture, all there is is actuality of various kinds. Material beings are not composites of actuality plus some kind of elusive stuff known as matter, they are instead just composites of certain sorts of actuality. Reality is actuality all the way down, and substances are bundles of actuality, unified by organization around a substantial form.

All actuality derives its existence from God. "The first completely perfect actuality, which has in itself the whole fullness of perfection, causes actual existence in all things" (*QDSC* 1c). The physical world is one manifestation of actuality, but there are other manifestations, nonphysical ones. Different forms of actuality exist at various removes from God. Those that are closest are the spiritual substances, the angels. The more things become material, the less actuality they possess. Prime matter is "the most incomplete of all beings" (*ibid.*); this is the external limit to being, since prime matter has no existence and no actuality at all. To ascribe matter to some being is not to say that it has actuality plus some additional stuff, its material stuff. Instead, to be material is to be actual in a certain limited, inferior way. Matter is no more than a particular manifestation of actuality: complex actuality in motion, subject to alteration, generation, and corruption.

Prime matter is therefore just a logical abstraction, asymptotic to the curve of being. It is a conceptual part of material objects, a part we can identify only as that which would be left if, *per impossibile*, all actuality were stripped away. In a sense, then, Aquinas's theory of matter is eliminative. His talk of prime matter does not introduce some primitive, mysterious stuff. It does just the opposite, because it entails the complete rejection of matter as any kind of stuff having independent ontological status.

When Aquinas insists in 75.1 that actuality is explanatorily basic (see §1.3), I take him to be relying implicitly on this deeper metaphysical scheme. Actuality is explanatorily basic because it is metaphysically basic, because there is simply nothing else that might figure into an explanation. What seem to be explanations in corporeal terms – the brain, the heart, fire, air – always turn out in the end to be appeals to actuality. If Democritus had been right about fire as a basic principle, he would still have been right only insofar as fire had a certain kind of actuality. If modern materialists are correct that the brain is the organ of thought, this is so only

insofar as the brain has a certain sort of actuality. Behind one level of actuality lies another, and behind that one lies still more actuality. If one could strip away all the actuality from a substance then there would be nothing left, because actuality is all there is.¹

These suggestions are highly unorthodox. Aquinas regularly talks as if material substances are composed of matter and form, and he regularly speaks as if prime matter is a kind of substratum. But it seems to me that such talk cannot be taken literally. Consider, first, prime matter. It is often assumed that Aquinas is committed to prime matter as the substratum of substantial change.² And he does say, for instance, that matter is the "first underlying subject" (*InMet* VII.2.1286) and the "ultimate subject" (*ibid.*, 1289). Here in the Treatise he remarks, "Every motion presupposes something immovable. . . . When it is the substantial form that is changed, the matter remains immovable" (84.1 ad 3). But such passages have to be read carefully, because the broader contours of Aquinas's metaphysics strongly suggest that he does not mean there is anything actually underlying all change. When a new substance comes into existence, the old substantial form is corrupted, as are all of the old accidental forms (see, e.g., *QQ* 1.4.1, and §§4.3 and 4.4). On its face, this sort of radical discontinuity seems implausible. But Aquinas's substance criterion commits him to this view. If something is a substance, then no part of it can survive apart from the substance (§3.2). Moreover, the cases that seem most bizarre will not be cases of true substances at all: boulders being broken into rocks, dough being baked into bread. In these cases there is no substantial change, and so no radical discontinuity is implied. But now in cases where there is such radical discontinuity, it would seem quite peculiar for Aquinas to make an exception for prime matter. If prime matter were a real part of material substances, it ought to be corrupted when the substance is corrupted. So the very fact that Aquinas does treat prime matter as an enduring substratum shows that it cannot be a metaphysical constituent of substances.

It is often claimed that unless prime matter really exists, Aquinas cannot explain what distinguishes substantial *change* from mere *succession* – the difference between a thing's changing into some other substance and a thing's going out of existence at the same time that a new substance comes into existence (see, e.g., Spade 1998, p. 274). For substantial change to count as change rather than annihilation followed by creation, it is said that there must be something that endures. Now I grant that Aquinas accepts the need for some kind of substratum in all cases of change. He remarks, for instance, that "it is part of the nature of change for *the same thing* to stand differently, now and earlier" (45.2 ad 2). But he goes on to explain that this analysis holds for substantial change in only a qualified way: "sometimes there is the same entity *only in potentiality*, as in substantial change, the subject of which is matter." This again suggests that prime matter is not a substrate in any direct and unqualified sense. So I agree that Aquinas needs to distinguish substantial change from succession, and

I am willing to grant that he sometimes analyzes the difference in terms of prime matter. But this leaves entirely open the question of prime matter's ontological status. In view of his constraints on the unity of substances (as explained in the previous paragraph), there seems no room for prime matter to be an enduring substrate in any straightforward sense.

Now consider the claim that material substances are composed of matter and form. The sculpture is a composite of matter and form inasmuch as it is a composite of bronze and a certain shape. But the bronze is not just matter, but matter of a certain kind, actualized matter. So a form-matter composite is not a composite of actuality on one side and something else (potentiality?) on the other side. Actuality comes in on both sides. (The same is true of soul and body.) The form-matter distinction is important to Aquinas because it gives him a way of picking out one respect in which a thing is actualized, while pushing other forms of actuality into the background. If I am wrong that actuality is all there is, then we ought to be able to divide a substance into actuality and something else (potentiality? matter?). But there is no way to do this. Take away the actuality and there is nothing left.

Aquinas finds it explanatorily useful to distinguish between matter and form; his account is not reductive in that sense.³ But though the matter-form distinction does explanatory work, we should not assume that the distinction can be carried over directly into metaphysics. Metaphysically speaking, Aquinas's hylomorphism is reductive in the direction of form. To make this clearer, let me say that I mean to rule out only a certain class of nonreductive accounts. Aquinas's hylomorphism is reductive in the sense that, loosely speaking, the matter of a substance is nothing over and above its form. In saying this, I don't mean merely that for Aquinas matter and form make one thing, a single substance. That is utterly uncontroversial, and is true for my head and feet just as much as it is for my body and soul. I mean something further, something that might be articulated more precisely by saying that matter has no causal powers not possessed by form. Bodies are composed of matter and form, but it is not as if the matter does something that the form does not. So while I do not mean to deny that it is important to distinguish between form and matter – that, after all, is the very point of hylomorphism – I do mean to reject the idea that form and matter are separate constituents making separate causal contributions to the composite substance. (I sometimes mark this notion of metaphysical reduction by speaking of a *conceptual* rather than a *real* distinction between form and matter.) This leaves room for the theory to be nonreductive in other ways, inasmuch as a full account of human nature might make ineliminable reference to both form and matter. Indeed, much of what goes by the name 'nonreductive' in contemporary philosophy of mind is compatible with how I understand Aquinas's account.⁴

One kind of evidence for the reductive nature of Aquinas's hylomorphism comes from his account of how forms are "brought out from the potential of the matter" (*InMet* VII.7.1423; see §4.1). There is other evidence as well.

Commenting on a passage in the *Physics* that describes form as “not separable except by reason (*kata ton logon*)” (193b5), Aquinas remarks:

although form is not separated from matter in reality [*secundum rem*], nevertheless it differs from it in reason [*ratione*]. For just as bronze and shape, although one in subject, differ in reason, so do matter and form (*InPh* II.2.151).

The reductive nature of the account is also suggested when Aquinas distinguishes between a whole composed of quantitative parts and a whole composed of definitional or essential parts. As instances of the latter, he offers when “something being defined is divided into the parts of its definition, and something composite is analyzed into matter and form” (76.8c). It is telling that Aquinas groups matter and form together with the parts of a definition. We know that, for Aquinas, a definition like *rational animal* distinguishes between merely conceptual parts of a human being: “The various parts of a definition do not signify various parts of the essence from which that essence is constituted, as if from different things. Instead, they all signify one thing” (*InMet* VII.12.1564). There are not two souls or even forms in a human being, one responsible for our being rational, the other for our being an animal (see 76.3–4). *Rational* and *animal* are merely conceptual parts of a human being. Matter and form, he says in 76.8c, are parts of a similar kind.⁵

Although it might seem that such reduction is untenable in the human case, Aquinas is eager to claim that the soul-body relationship is on a par, in this respect, with other form-matter composites. Thus he remarks,

Many had puzzled over how soul and body are made one. . . . But this puzzle is groundless, now that it has been shown that the soul is the form of the body. This is why Aristotle says that “we need not ask whether soul and body are made one – just as we do not puzzle over this in regard to wax and its shape, nor in general in regard to any matter and the form of which it is the matter.” For *Metaphysics* VIII showed that form is united to matter per se, as its actuality, and that *matter’s being united to form is the same as matter’s existing in actuality* (*InDA* II.1.368–80, re. 412b5–8).

The puzzle over what unifies soul and body is groundless, because there are not two things, form and matter, that need to be tied together. As the italicized passage says, matter united to form is no different from matter’s actually existing.

The reference to *Metaphysics* VIII indicates how much weight Aquinas gives to that discussion of what unifies form and matter. There Aristotle explains why there is no real problem. “If, as we say, one is matter, the other form, one in potentiality, the other in actuality, then the question will no longer appear to be puzzling” (1045a23–25). Aristotle goes on to state that potentiality and actuality are somehow one thing (1045b21), which leads Aquinas to remark:

“[P]otentiality and actuality are in a certain way one thing.” For that which is in potentiality is brought to actuality. And thus there is no need for them to be united

by any bond, like things that are completely distinct. Hence “there is no cause” that makes things composed of matter and form be one, “except that which moves potentiality into actuality” (*InMet* VIII.5.1767).

Aquinas’s explanation comes in the second sentence. We are not talking about two things, one potential, the other actual, but one thing, which first exists in potentiality and then in actuality. Because there is only one thing here, there is no need to imagine that form and matter must be tied together in some way, either by location or causal bonds (§3.1). The only kind of cause one needs to look for, as an explanation for the unity of form and matter, is the efficient cause: the thing that “moves” the substance from “potentiality into actuality” in the first place (§4.1).⁶

The reduction described in these passages cannot be in the direction of matter, because it is perfectly clear that the human soul is something over and above its matter. In particular, the human soul clearly has causal powers that the body lacks (§2.2). One might therefore decide that Aquinas’s hylomorphism can not be reductive at all, and that (at least in the human case) form and matter must be really distinct metaphysical principles. This would be a mistake. For if we reverse the direction of reduction and conceive of matter as a kind of actuality, then Aquinas’s account of the soul begins to cohere beautifully with his broader metaphysics. This, I will argue, is the best evidence for my unorthodox reading of Aquinas’s metaphysics.

But before making that case, let me consider a final consideration against my reductive account. Even if I am right that the form-matter distinction is not a form of metaphysical dualism, one might still regard my account as wrongheaded in that it defends the wrong kind of monism. Rather than treat actuality as basic, perhaps we should treat the composite substance as basic. Consider this remark:

Forms do not properly have existence; they are rather that by which things have existence. . . . Forms begin to exist insofar as they exist in things being made, things that have their existence through forms (*InMet* VII.7.1419).

I certainly don’t want to downplay passages of this sort. As I have already stressed, it is the composite that is the human being, not the form (§2.1), and the composite that most fundamentally exists, as a substance (§§3.2 and 3.3). But such passages are perfectly consistent with the view I am advancing. Actualities cohere insofar as they are bound together as a substance. Separated from a substance, actualities lose their nature and standardly lose their very existence. (The rational soul is exceptional in this regard (see §§2.2 and 12.3).) Strictly speaking, it is the animal that exists (and perceives and desires); the soul has these characteristics only insofar as it is a part of the whole. But it is consistent with this to say that the whole animal just is various forms of actuality, bundled together in a certain way. Substances are bundles of actuality, bundled together in virtue of being unified around a single substantial form. Because Aquinas has a robust account of substantial unity (see §3.2), he doesn’t need to

invoke an underlying material substrate to unify the actualities that constitute a substance.⁷

The case for my account is not primarily textual – on that front I can at best mount a holding operation. My case is instead based on the account's tremendous explanatory power. One very general advantage of the account is the perspective it gives us on materialism as a hypothesis about the nature of the universe. The materialist believes everything that exists adheres to certain basic physical principles. At present we may be able to state these principles only in rough form, but materialists nevertheless know the sorts of thing that violate these principles: God, angels, Cartesian souls, and so on. To reject materialism, then, is to accept dualism, to embrace a world of bizarre objects that break our most basic and well-confirmed rules for how things ought to behave.

Rather than treat matter as conceptually basic, Aquinas focuses on actuality, and treats this as the unifying element in all being. Of course it may be that all being is material being. But it is a virtue of Aquinas's approach that we are not pressured to make that assumption. Dualism concedes too much to materialism, accepting the legitimacy of *material being* as a well-defined class and then proceeding to tell a story about how there is another class of being, composed of some funny nonphysical stuff that we know nothing about. This can not help but look desperate and implausible, because the materialist has already set the stage in such a way that any plausible sort of stuff will count as material stuff.

But if dualism appears desperate, materialism itself should seem obscure or at least ill-defined. Consider what happens as we keep reducing ordinary material objects to more basic entities at the microlevel. Materialism, on its most natural construal, holds that at some point our microanalysis hits rock bottom, the level of matter, where we stop. (Or perhaps reductive materialists can accept that matter is infinitely divisible, but that it is all matter, all the way down.) Aquinas's own understanding of matter suggests, on the contrary, that as we move from mid-sized lumps to molecules to atoms, matter is steadily analyzed away in favor of form or actuality. The category of matter turns out to be shorthand for a certain kind of actuality, actuality in motion. Modern science at least suggests that Aquinas might have been right, inasmuch as physics no longer treats matter as a fundamental category of analysis (see Davies and Gribbin 1992).

It is natural to suppose that there is for Aquinas a fundamental divide between the immaterial and the material. I deny that. These are not two types of stuff, but simply two classes of actuality. Material actuality is that which is subject to alteration, generation, and corruption. When 75.5 obj. 2 describes "being a subject and undergoing change" as two "distinguishing features of matter," this should not be read as if these were telltale signs indicating the presence within of prime matter. Rather, to be material just is to be subject to nested levels of actuality, and to be transformed in certain ways by such actuality. To be material just is to be actual in these ways

among others; to be immaterial just is to be free of such (imperfect) actuality. So in arguing for the immateriality of intellect, Aquinas grants that the intellect is subject to and altered by thoughts and concepts (75.5 ad 2). But in intellect this occurs differently from how it occurs in material beings, where the reception of one thing entails the loss of another. In intellect there is potentiality and the reception of forms, but “without anything’s being taken away” (79.2c). So to be material is not just to be in potentiality, but to be in potentiality in a certain way: in motion, subject to alteration, generation, and corruption. The human intellect, like the angels, is in potentiality otherwise, and hence is not material (see *SCG* II.49–55).

Of course, actuality is itself an exceedingly broad notion, but that’s just the idea. Aquinas wants to conceive of being as widely as possible, and then

Quintessence

Aquinas, following standard Aristotelian theories of cosmology, holds that the celestial spheres, as well as the sun, stars, and planets that are located within those spheres, are composed of a fundamentally different kind of matter than we find in sublunary bodies. So my remarks here about matter apply only to the sublunary realm: “earthly matter reaches its final perfection through change and motion” (58.3c). As for the heavens, what we know about their nature is mostly negative: “Aristotle makes celestial bodies known by negating the properties of lower bodies” (88.2 ad 2, referring to *De caelo* I 3). The heavenly bodies are free from contrary qualities, and therefore incorruptible. In 76.5 ad 2, Aquinas points out that the human body is “far removed from contraries,” and so “in this respect it is in a certain way similar to a celestial body.”

In 66.2, Aquinas argues that celestial matter is different in kind from earthly matter (a doctrine that would remain standard until the seventeenth century, when Galileo effectively exposed it as unfounded). This view would make trouble for my reading of Aquinas if his claim were that these are two different kinds of prime matter. (Prime matter, on my reading, can not come in kinds.) But he is clearly not making that claim. The argument, instead, is that earthly bodies are composed of the four basic elements (earth, air, fire, water), elements not found in the heavens: “the nature of a heavenly body is different from the nature of the four elements” (66.2c). The heavenly bodies are composed entirely of a fifth essence, a quintessence.

See §2.3 for a discussion of how these heavenly bodies influence our sublunary realm.

consider the different ways in which it might be realized. There are many different ways we might classify types of actuality. One way is to distinguish the material from the spiritual, but this divide is not fundamental: thus a *genuinely* unified substance, a human being, can be both material and spiritual. Because of the way the ancient materialists conceived of matter, they were unable to take seriously the notion of spiritual being.⁸ Perhaps they ended up with something closer to the right view, we might say in retrospect today. But surely we should admire Aquinas's metaphysics for not deciding such questions in advance.

Noam Chomsky has been arguing for over thirty years that what gets counted as material by philosophers today is whatever we have had success at understanding. Because we lack clear accounts of what matter is, what bodies are, and what the physical is, we simply take material beings to be "whatever science constructs" (1995, p. 4; see 1968, pp. 83–84). If this is the best we can do as a formulation of materialism, then we would be better off embracing Aquinas's conceptual framework. It does not entail the spirituality of the human soul, nor does it even preclude materialism. Both possibilities remain open. The account is extremely abstract and metaphysical, resting on an overarching conception of actuality as a fundamental explanatory principle. This is too vague to be satisfying in the twenty-first century: we know too much about the rest of the natural world to rest content with a mere metaphysical schema for the mind. But though it is schematic, Aquinas's account may at least have the virtue of not being misleading, of not tying us down to a theory of mind that does not work. Since we haven't yet figured out which theories of mind work and which do not, it is especially important that we begin with a flexible conceptual framework.

This is not meant to be an exercise in neo-Thomistic metaphysics; it is a proposal about how we should understand Aquinas himself. So I want conclude by stressing how, with this deeper metaphysics in hand, we can go on to make sense of much more in the Treatise. Perhaps the clearest way to see this is to consider the thesis that the rational soul, alone among the substantial forms of material substances, is subsistent, and hence can in principle exist apart from the body (75.2). It often strikes readers as incoherent for Aquinas to argue that the soul, the form of a body, could exist without the body. But that is because we are so accustomed to thinking of bodies as the ultimate reality, the stuff on which everything rests. We have, in other words, accepted the ancients' theory of matter. Aquinas believes that we have the story backward, and that it is forms or actuality on which everything rests.

Form gives existence to matter, and so it is impossible for matter to exist without some form. It is not, on the other hand, impossible for a form to exist without matter. For form, considered as form, is not dependent on matter. But if some forms *are* found that can exist only in matter, this is the case insofar as they are distant from the first principle, which is the first, pure actuality (*De ente* 4.46–54 [24]).

The idea of forms existing “in matter” is potentially misleading, and has to be read in light of what follows: for a form to “exist only in matter” just is for it to be actual in a deficient way, to be “distant from the first principle.” Matter is not something that a form is literally joined to, or that it somehow dwells within. In other words, to say that a form “exists only in matter” is not to ascribe a relational property to that form, but to characterize that form’s intrinsic character. So understood, it is neither incoherent nor obscure to claim that a form can exist independently of matter. A subsistent form has a less deficient mode of being; it is not a material form, but this is not to say that it can magically free itself from some material substratum. That’s just the ancient theory of matter all over again (§1.4).

A closely related advantage of this reading is its ability to explain how the soul can be composed of parts, some of which are material in the sense that they actualize the body, whereas others are wholly immaterial and subsistent (see §§2.2 and 2.3). How can such disparate kinds of actuality be counted as parts of a single form?⁹ The first four objections of 76.1 raise this issue, by pressing the question of how the intellect can be immaterial and yet be part of something (the soul) that is the form of the body. Aquinas’s initial reply is simply to insist on a distinction between the intellect (a power of the soul) and the underlying principle that is the soul itself (76.1 ad 1–3). But the fourth objection goes deeper, asking how that underlying principle can be the body’s form and yet give rise to a power that seems so different, “more abstract or simple.” Aquinas replies like this:

The human soul, because of its perfection, is not a form that is immersed in corporeal matter or completely subsumed by it. And so there is nothing to stop one of its powers from not being an actuality of the body – even though the soul is essentially the form of the body (76.1 ad 4).

This should look unsatisfying on the supposition that to be the form of matter is a fundamentally different sort of thing than being an immaterial, subsistent power. But on my view these are both simply forms of actuality. The reason Aquinas sees no difficulty in putting material and immaterial forms under one heading is that he sees no fundamental divide between the material and the immaterial. What is ultimate, in Aquinas’s system, is actuality. Although only some actuality is physical, there is no reason the rational soul, a complex blend of various capacities, cannot contain various types of actualities. The following passage suggests much the same perspective:

One must say that a human being has no substantial form other than the intellectual soul alone, and that just as it contains the power of the sensory and nutritive souls, so it contains the power of all lower forms, and that it alone brings about whatever it is that less perfect forms bring about in other things (76.4c).

The intellectual soul has the power not just of the sensory and nutritive parts, but even of “all lower forms” – that is, the various nonessential

qualities that stem directly from the soul (see §5.5). Of course, such forms will be very far from the sort of actuality that is the human mind. But to Aquinas this makes no difference.¹⁰

To say that human beings are bundles of actuality is not to say that we are entirely souls, or that we have no bodies. My soul is less than the sum of my actuality, because my soul is identified only with the actuality that gives me life. Moreover, my body is more than just prime matter, because the body is matter actualized in various ways (in my terms, the body is various sorts of material actuality). But though the account does not reduce human beings to souls (which would of course be the wrong result, since Aquinas explicitly rejects this at 75.4), it does close the gap between soul and body. The apparently disparate ingredients of human nature constitute a single form, whose parts function together, are essentially related, and give rise to a substance composed of a complex variety of actualized forms which is nevertheless one thing in the strongest sense. All of this is to say that Aquinas gives us a theory of the soul that actually solves the mind-body problem, and does so in a thoroughly satisfying way.

Readers who have persevered this far should now see, I hope, something of the way I take Aquinas's thinking about human nature to be wrapped together in a single complex system. Although Aquinas takes many of the pieces of this system on loan from Aristotle, he puts them together in an account of impressive depth, scope, and coherence. Given this complexity, it is no wonder that Aquinas remains the most underappreciated and misunderstood of the great philosophers.

PART II

Capacities (QQ77–83)

5

The soul and its capacities

Q77 is perhaps the most difficult question in the Treatise, at least at the entry level. The issues it raises about “the capacities of the soul in general” look abstruse and uninviting, concerning matters such as the nature of a capacity (§5.1) and the relationship between such capacities and the soul’s essence (§5.2). But although Q77 does not raise the obviously big issues found in other parts of the Treatise, it would be a mistake to dismiss this question as a mere metaphysical balancing of the books. The ideas developed here are fundamental to Aquinas’s thinking about human nature, not just in 1a but in the later treatments of virtue that dominate the Summa’s second part. The distinction between the soul’s capacities and its essence would later prove to be one of the most controversial aspects of the theory (§5.3). Without this distinction, the Treatise would face a crippling circularity (§5.4). Moreover, Aquinas’s focus on the soul’s capacities is a consequence of an important methodological principle: that the soul’s essence is not directly knowable (§5.5).

5.1. What is a capacity?

In the *De anima*, Aristotle offers the following remark in the course of making a transition from his general treatment of the soul to his treatment of the individual powers of the soul:

It is therefore ridiculous . . . to look for a common account that will not be appropriate to any actual thing nor accord with its distinctive, indivisible species – while giving up on an account that will (II 3, 414b25–28).

Aristotle’s point is that a general definition of soul goes only so far in explaining what the soul is. A complete account of the soul needs something more: it needs an account of the various types of soul that actually exist. Aristotle concludes that “we have to look, in each case, at what the soul of each one is: the soul of a plant, or the soul of a human being or beast” (b32–33).

In commenting on this passage, Aquinas simply paraphrases, but then adds the words, “this is to know, *for each part of the soul*, what it is” (*InDA* II.6.20–21). The remark indicates that Aquinas views the project of investigating the souls of plants, human beings, and other animals as equivalent to the project of investigating the three parts of the human soul: nutritive, sensory, and rational. In one respect this is not surprising. As §2.3 stressed,

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Aquinas thinks that the human sensory faculties function just as the sensory faculties in other animals do. In general it makes surprisingly little difference, from Aquinas's point of view, whether we focus on the soul of a plant, say, or on the nutritive soul of a human being. (Obviously, this is true only at a certain level of abstraction – we're not talking about chlorophyll. But that is the level of abstraction at which Aquinas, as a theologian, sets his sights (§In.4).)

Aquinas regularly speaks of these different parts of the soul as different souls; thus, he continually refers to the nutritive soul, the sensory soul, and the rational soul (78.1c). To the casual reader, it could look as if Aquinas believes that human beings possess three different souls: nutritive, sensory, and rational. In fact he explicitly denies that this is the case: "one must maintain that the soul in a human being – sensory, intellectual, and nutritive – is numerically the same" (76.3c). There was, indeed, a general consensus among the scholastics that living things possess just a single soul (see §4.4). Rather than speak of different souls within a single animal, Aquinas (and Aristotle too) tend to speak of the soul as having parts. Thus Aquinas describes "the first soul, which is called the nutritive soul, and which in plants *is* their soul, whereas in animals it is *part* of their soul" (*InDA* II.9.225–27).

There is nothing objectionable about thinking of the soul as having parts. In general, it is perfectly unexceptional to think of forms as having parts. When speaking of the shape of a triangle, for example, we might distinguish between angles and sides. In the case of a statue, we might refer to the shape of the head, or the shape of the torso. These, surely, are parts of forms. In fact, to describe the soul's various faculties as parts seems, if anything, a quite cautious label to use. (More cautious, even, than the word I just used, 'faculties.')

However we want to describe the nutritive, sensory, and rational aspects of the human soul, it seems safe to say that these are all *parts*.

But the term 'parts,' precisely because it is so very cautious, is also of limited explanatory value. The natural question to ask, and the question Aquinas does ask in Q77, is this one: *What kind of parts are we talking about?* Aquinas's basic answer is that we are talking about parts in the sense of powers or capacities. He establishes this answer most explicitly in a passage from the *De anima* Commentary, where he warns against a misunderstanding of the claim that the soul is divisible into parts. The claim is false if it means that the soul is "a kind of magnitude or quantity divided into various quantitative parts" (I.14.70–71). The claim is true, however, when understood as meaning that the soul contains what Aquinas refers to as *partes potentiales* – parts that are capacities.

In this way it is true that soul has various parts and powers [*vires*], and that it intellectually cognizes through one whereas it senses through another. For the soul is a kind of whole capacity [*totum potentiale*], and in this connection 'part' is interpreted as a capacity [*potentialis*] with respect to the whole capacity (65–69).

This passage serves as a useful introduction to the more difficult treatment in Q77. Aquinas warns against a crude misunderstanding: we should not take the soul to have parts that are spatially discrete. Instead, the soul's parts are its various capacities or powers. As for what these *partes potentiales* are, and how they are related to the soul as a whole, the Commentary has nothing more to say.

Aquinas regularly uses three Latin words to talk about the soul's parts: *potentia*, *virtus*, and (less often) *vis*. Translators have standardly used the word 'power' to render all three of these words. This practice makes some sense. The three words are, in this narrow context, intended to be synonyms: Aquinas himself repeatedly uses the phrase "*potentia* or *virtus*" in order to indicate that, in these contexts, he is using the words interchangeably (75pr, 77.1sc, 77.2 obj. 2). Moreover, 'power' is in many respects an appropriate translation. Aquinas uses these three Latin words to refer to the soul's various abilities to engage in operations of different kinds; we might well, then, think of these various abilities as various powers that the soul possesses. I believe, for reasons that emerge below, that there are some advantages to using the word 'capacity' to translate *potentia*, reserving the word 'power' to translate *virtus* and *vis*. But the differences are subtle.

Regardless of what choice the translator makes, there is one important terminological factor that cannot be captured in modern English: the fact that *potentia* is Aquinas's standard word for talking about potentiality as contrasted with actuality. By referring to each part of the soul as a *potentia*, Aquinas surely means to invoke this pervasive Aristotelian distinction. But on the face of things, it is not easy to see how he means the distinction to be applied. After all, the first time we encountered this potentiality-actuality distinction was in 75.1c, where the soul was identified as "not a body, but the actuality of a body" (§1.3). Now, it seems, Aquinas is positioning the parts of the soul on the potentiality side of the distinction. This seems to leave the soul with the curious status of being an actuality composed of parts that are all potentialities. Is this coherent? Is the whole not the sum of its parts?

One way to cut such questions short would be to deny that these *potentiae* should be viewed as potentialities. Even God, one might point out, has *potentiae* of this sort, although God is pure actuality. (One set of Aquinas's disputed questions goes under the title *De potentia Dei*.) It would be natural, then, to suppose that the soul's *potentiae* have at most a distant and indirect connection with the potentiality associated with matter. (This, indeed, seems to have been Scotus's view (*Reportatio* II.16, p. 69).) On this line of thought, it would be a mistake to understand the soul's capacities or powers in terms of the potentiality-actuality distinction.

In fact, however, Aquinas's account of the soul's capacities relies heavily on this very distinction. To see how that is so, it will be helpful to look at the four principal kinds of *potentia* that Aquinas discusses:

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- A. The potential of matter for form.
- B. The potential of essence for existence.
- C. The potential of an entity for being acted on.
- D. The potential of an entity for acting on another.

I have not found any one place where Aquinas systematically works out the differences between these four types of *potentia*, nor do I know of an informative general account of what it is to be a *potentia*. But by comparing various passages, the nature of this four-fold distinction emerges.

1. *A vs. B*. Matter, taken by itself, is potentially a thing of some kind. It has the potential to become the matter of a dog, a cat, or a human being, but that potential must be actualized. Conceived of in isolation, matter lacks not only existence but also all other features; so conceived, matter is pure potentiality (§1.4). Even when actualized, however, matter possesses a further sort of potentiality: the potentiality of the matter-form composite either to exist or not to exist. Only in God's case is there no distinction to be drawn between what a thing is (its essence) and whether that thing exists: "God is his own existence" (2.1c). In contrast, "in the case of anything created, its essence differs from its existence, and is related to it as potentiality to actuality" (54.3c). The AB distinction is most important in explaining how angels are not pure actuality, even though they are immaterial. The immateriality of an angel precludes it from having type-A potentiality. Still, angels have type-B potentiality:

Everything that receives something from another is in potentiality with respect to that thing, and what it receives is its actuality. Therefore the quiddity or form that is an angel must be in potentiality with respect to the existence it receives from God, and that existence is received as an actuality (*De ente* 4.147–52 [28]).

Corporeal substances, on the other hand, possess both kinds of actuality:

In the case of substances composed of matter and form there are two compositions of actuality and potentiality. First, there is that of the substance itself, which is composed of matter and form. Second, there is the composition of the substance itself, already composite, with existence (*SCG* II.54.1295).¹

Part I discussed at some length the composition of matter and form, and so I forbear from taking it up again here. The distinction between essence and existence is a notoriously difficult one, and I postpone discussion of it until §5.2, below.

2. *AB vs. CD*. Type-AB potentiality picks out the most basic kinds of potentiality in nature: the potential of matter to become one kind of thing or another; the potential of a certain kind of thing for existence. CD potentiality points to a further kind of potential possessed by entities that are fully actualized with respect to nature and existence: the potential to be affected or not affected, or else to act or not act. In this sense, "a *potentia* is nothing other than the principle of some operation, whether active or passive" (*QDA* 12c). There is a wide range of potentialities that come under this heading. The weight of a stone, for example, is an inner prin-

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ciple that makes it possible for the stone to be moved downward (*InMet* V.14.955). A flammable object is capable of being set on fire not just because there is something capable of actually setting it on fire, but “because it has the potentiality, within itself, to be set on fire” (*SCG* II.60.1375). Everything that acts, and everything acted on, possesses some such potentiality (*ibid.*). At this point we begin to stretch English to the limit by speaking of *potentialities*; we should, instead, speak of capacities or powers to engage in various operations. Still, even though we should give up translating *potentia* by ‘potentiality,’ we should not forget the close conceptual tie that Aquinas sees between the various senses of the Latin term:

Just as existing itself is a kind of actuality of an essence, so operating is the actuality of an operative capacity or power [*potentiae vel virtutis*]. Accordingly, each of these is in actuality: the essence in terms of existing, the capacity in terms of operating (*QDSC* 11c).

So although the soul itself is an actuality, it has parts that are capable of further actualization. In §5.2 we will see in more detail how this works.

3. ABC vs. D. Potentiality of types ABC is always a receptive or passive potentiality. Type-D potentiality is of a fundamentally different kind; this is not a capacity to be acted on, but a capacity to act on other things. Aquinas believes that this active meaning is the term’s original one: “*Potentia* was first imposed to signify the principle of an action, and secondarily extended so that even that which receives the action of the agent is said to have a *potentia*” (*I SENT* 42.1.1 ad 1). Here, most properly, we might speak of power instead of potentiality or capacity, and thus it is natural to speak of God’s power, and to deny that God has any potentiality. In fact, when Aquinas denies that God has potentiality of kinds ABC, what he often says is that God is not *in potentia* (see *SCG* I.16). That points to the fact that this ubiquitous scholastic phrase, *in potentia*, refers to potentialities of type ABC.² God has powers, or potentialities, but they are always actualized, and depend on nothing else to be actualized. God is never *in potentia*, and the same is true, albeit on a reduced scale, for a human being’s agent intellect (54.1 ad 1).

4. C vs. D. The soul’s capacities are a certain kind of type-CD potentiality. The CD distinction, between active and passive capacities, picks out a fundamental division among the soul’s capacities. In 78.3c, Aquinas identifies the external senses as passive, type-C capacities. The nutritive powers, in contrast, are entirely active, type-D capacities (79.3 ad 1). In 79.2, he identifies intellect as a type-C capacity, but then in 79.3 he makes it clear that intellect has a passive component (possible intellect) and an active type-D component (agent intellect). He later argues (in 79.7c) that there can be no further intellectual powers beyond these two. The argument he makes there implies that once we distinguish one kind of capacity from another (e.g., intellect vs. will), the only way of drawing a further distinction is to make one part passive, another part active.

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Aquinas seems to have changed his mind about how to draw the CD distinction. One way it cannot be drawn is by appealing to the fact that active powers perform an operation:

An active capacity is not distinguished from a passive one because it has an operation: for then, since all the soul's capacities, active and passive, have an operation, every capacity of the soul would be active (*QDV* 16.1 ad 13; see 26.3 ad 4).

Even passive capacities have an operation, which is why Aquinas sometimes refers collectively to types CD as the operative potentialities (see *QDSC* 11c, quoted above). To distinguish between them, then, Aquinas appeals to the Aristotelian idea that capacities should be distinguished on the basis of their objects (see 77.3sc): passive capacities, he argues, have one kind of object, active capacities another. But he seems to have changed his mind about exactly how to work this out. One early proposal is quite straightforward:

If an object is related to its capacity as affected and transformed, then the capacity will be an active one. If, on the other hand, the object is related as agent and mover, then the capacity will be passive. And so it is that all the capacities of the nutritive soul are active, because in nourishment, growth, and generation, food is transformed through a capacity of the soul (*QDV* 16.1 ad 13).

The nutritive powers are active, then, because they transform their objects; a passive power, in contrast, would be itself transformed by its objects. This same line of thought would work for agent intellect, which transforms its objects, phantasms, through the process of abstraction (§10.3). In contrast, the possible intellect and the senses are transformed by their objects; these capacities are (at least initially) mere passive recipients of data. Such capacities are akin to the capacity of being flammable – or, better, being absorptive.

Aquinas would soon abandon this early account, and it is not difficult to guess why. The account is simple because it is circular: it says nothing more than that capacities are active when they act on their objects, passive when they are acted on. Rather than illuminate the nature of the soul's capacities, *QDV* presents a lesson on the active and passive voice.

By the time of the Treatise, Aquinas has developed a more interesting way of making the CD distinction. As before, type-C capacities are described as mere recipients of their objects: "An object is related to the act of a passive capacity as its source and moving cause: so color, inasmuch as it moves sight, is the source of seeing" (77.3c). Here again, the external senses are paradigmatically passive; their objects are the things that act upon them (§6.3). The significant change in Aquinas's account comes when he describes type-D capacities.

An object is related to the act of an active capacity as its endpoint and goal: in this way the object of the power for growth is the full size that is the goal of growth (77.3c).

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Here the object of an active capacity is the end-product of the operation. The soul's nutritive powers are active because they produce something: a full-sized living being. Analogously, agent intellect now counts as active because it converts phantasms into something else: intelligible species (see 79.3c).

Aquinas is working in 77.3c to preserve the Aristotelian doctrine that capacities are distinguished in terms of their objects. But he is now developing that doctrine in a more substantive way. Active capacities are distinguished by the fact that all and only capacities of that kind produce some sort of object. Passive capacities, in contrast, lead only to the operation itself; there is no further product (*InNE* I.1.184–92 (12)). This new understanding of the CD distinction gives us a more fruitful way of testing whether other capacities of the soul are active or passive. It also sheds light on how Aquinas conceives of sensory and intellective cognition: in particular, it shows that the external senses do not generate some further inner product (such as sense data) beyond the act of sensation itself.³

The four-fold distinction just outlined concerns potentiality at the most general level. We need to draw still further distinctions, however, in order to understand the special character of the soul's capacities. Even if we focus on potentiality of types CD, we are still casting our net too widely. Some type-C potentialities will be mere dispositions to be affected in a certain way: someone might have the potential for illness, for instance, as the result of having too much of some one bodily humor, or as the result of having too little natural vigor. Aquinas says that each of these, having too much and also having too little, should be thought of as a *potentia passiva* (*InMet* V.14.963). Some type-D potentialities will likewise be mere dispositions: musical skill, for instance, and knowledge of medicine are each a kind of *potentia* (*InMet* IX.4.1815). There is nothing surprising about Aquinas's willingness to extend the notion of *potentia* this far. According to the account given above, any internal source or principle of action should count as a potentiality of either type C or type D, depending on whether it is passive or active.

One way of specifying more narrowly the nature of the soul's capacities is to stress that they are all endowed naturally. A key difference between the *potentiae* under discussion in Q77 and the dispositions mentioned in the previous paragraph is that we are born with the former, but must acquire the latter. Here is how Aquinas describes that latter group:

Some capacities are innate in those to whom they belong, like the senses are in animals, whereas others are acquired by practice, like the art of playing the flute and other such performing arts. Still others are acquired through teaching or learning, like medicine and other arts of that sort. Because we obtain some of these capacities through practice and thought, it is necessary that one first engage in and prepare for the activities, before acquiring the capacities. Someone becomes a

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flutist, for example, by playing the flute, and becomes a doctor by studying medicine (*InMet* IX.4.1815).

Obviously, one doesn't begin with the ability to play the flute; these learned capacities are acquired by practice. In contrast, the capacities of the soul are present at birth:

But the other capacities, which are not acquired by practice but are endowed naturally and involve being acted on – for instance, the sensory capacities – do not develop through their acting. For someone does not acquire the sense of sight by seeing; rather, because he has the capacity for sight, he is made actually to see (*ibid.*).

Innate capacities can be used without practice. Though it may take practice to use these capacities well (truly to hear the orchestra, for instance), the capacities themselves do not need to be built up through study or exercise. As we will see in more detail in §5.4, these capacities flow from the soul's essence (77.6).

The passage just quoted is merely a paraphrase of Aristotle (*Met.* IX 5, 1047b31–35), but it is clear that Aquinas takes this distinction between potentialities quite seriously. In his own theological works he marks a related distinction by reserving the term *potentia* for the innate capacities under discussion in Q77. Learned capacities, in contrast, are generally counted as dispositions (*habitus*).⁴ Such dispositions are “midway between pure potentiality and pure actuality” (87.2c); more precisely, a disposition gives a capacity its focus and character: “Dispositions are various sorts of qualities and forms inhering in a capacity, by which the capacity is inclined to actions of one determinate kind” (1a2ae 54.1c). Ideally, dispositions perfect the capacities they inform; indeed, Aquinas simply defines a virtue as the perfection of a capacity (1a2ae 55.1c). Without dispositions, many kinds of action would be impossible. In arguing for this last claim, Aquinas considers the objection that innate capacities are a sufficient basis for action (1a2ae 49.4 obj. 2). Aquinas replies (ad 2) that some of the soul's capacities are not a sufficient basis for action: those that are indeterminately related to various possible actions. (We can play the flute well or badly; we can be doctors or shoe salesmen.) We need to acquire dispositions, then, to take advantage of the capacities we have always possessed.

These remarks lead directly to the foundations of Aquinas's ethical theory. In 1a2ae, after considering happiness (QQ1–5) and the nature of the actions that can bring us happiness (QQ6–48), Aquinas turns to consider the internal principles of human action.

These internal principles are capacity and disposition [*potentia et habitus*]. But because capacities were discussed in 1a, we are left now with considering dispositions: first in general, and then virtues and vices and other such dispositions that are the principles of human actions (1a2ae 49pr).

In other words, Aquinas conceives of moral psychology – the study of the springs of our ethical development – as having two parts: a study of our

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innate capacities and a study of our innate and acquired dispositions for various actions. The Treatise, in focusing on the soul's capacities, is developing one branch of moral psychology. That is exactly what we should expect, given the larger context of *ST* (§In.5). Aquinas views the study of human nature as primarily a study in moral psychology. The nature of human beings is determined by our ultimate end, a beatific vision that requires the perfection of our intellectual and appetitive faculties. We can now identify that perfection with the possession of virtue, and we can understand Q77 as the first, foundational step toward a theory of what moral excellence consists in.

5.2. The distinction between the soul and its capacities

We have just seen how dispositions are midway between having the capacity for an operation and actually carrying it out. In a similar way, capacities are midway between a thing's essence and its operations (*QDSC* 11 sc 4; *QDV* 10.1c). The Treatise announces at its start (75pr) that it will consider

1. the characteristics of the soul's *essence*
2. the characteristics of its power or *capacities*
3. the characteristics of its *operation*.

The second topic occupies QQ77–83, with Q77 devoted first to drawing the distinction between essence and capacity (a1), and then to explaining how these capacities are related to each other (aa2–4, 7) and to the soul (aa5, 6, 8).

Aquinas takes the essence-capacity distinction quite seriously, giving it extended discussion in at least six other places. Thomists sometimes speak in this connection of a “real distinction,” which is how John Duns Scotus described the theory in criticizing it. Aquinas, however, never uses that language; he simply says that “the soul's essence is not its capacity” (77.1c) – that is, they are not identical.⁵

ST first establishes the distinction in 54.3c, in the Treatise on Angels, where Aquinas claims that “neither in an angel nor in any creature is its operative power or capacity the same as its essence.” The argument he gives there seems to be the one he regards as the most decisive for this conclusion. In 77.1c, Aquinas turns to two rather different arguments for the same conclusion, and then in 79.1c he restates the earlier argument of 54.3c. I look first at this last treatment, and then at how 77.1c provides support at a crucial point.

The question of 79.1 is whether the intellect is a capacity of the soul or the soul's essence. Nothing that Aquinas has claimed up to this point in the Treatise explicitly settles the question. For although 77.1c does distinguish the soul's essence from its capacities, it doesn't decide any questions about what those capacities are. For all Aquinas has claimed, intellect might not be a capacity of the soul at all, but might instead be the very

Essentia essentiae

What does it mean to speak of the soul's essence? Aquinas is not very clear on this point. In part, the terminology simply reflects his need to draw some distinction between the soul's accidents (its capacities) and the subject and source of those accidents (the soul itself). But why refer to the soul itself as the *essence* of the soul? This is confusing because the soul is supposed to be part of the essence of a human being (along with common matter (§In.3)). In what sense does the soul have its own, further essence? Aquinas might seem to have in mind a kind of second-order essence: the essence of an essence. But this isn't quite right, because the essence of the soul turns out to be the only part of the soul that is included in the essence of the human being (77.1 obj. 7 and ad 7). So the essence of the soul is not the essence of an essence, but something more like the soul *qua* essence – in other words, the soul considered as (part of) the essence of a human being. So referring to the soul itself as the soul's essence seems to be a way of marking the fact that this core aspect of soul is what enters into our essence.

In any event, the character of this essential part of the soul is highly mysterious. Aquinas describes the soul as being “one and simple in essence” (*QDA* 10 ad 17), yet this simple essence must somehow be the source from which our various capacities flow (77.6). Such obscurities might seem an embarrassment for Aquinas's theory, but in fact we will see in §5.5 that his broader methodological outlook predicts we won't be able to say very much that's informative about our innermost nature.

essence of the soul. Still, both 77.7 and 77.8 take for granted that the intellect counts as a capacity of the soul. So it is not surprising that 79.1c begins by acknowledging those prior commitments: “It is necessary to say, in keeping with earlier claims, that the intellect is one of the soul's capacities and not the soul's very essence.” Then the argument follows, in three premises, plus a subargument for the first premise:

(1) For the essence of the thing operating is the immediate source of its operation only when that operation is its existence. For just as a capacity is related to its operation as to its actuality, so essence is related to existence. (2) But only in God's case is his intellectual operation the same as his existence. (3) Consequently, it is only in God's case that his intellect is his essence; in other intellectual beings, intellect is a capacity of the creature using it.

Two preliminary observations. First, the argument has the potential to be cast more generally. By revising the second premise appropriately, we could

show equally well that any operative capacity is not the soul's essence.⁶ Second, the argument is designed to show not that the intellect is a capacity, but that it is not the soul's essence. The former fact falls out of the latter as a kind of obvious corollary, stated only at the end of the conclusion (step 3). Evidently, Aquinas assumes that the intellect must be either the soul's essence or one of its capacities; the two must be jointly exhaustive. Hence 79.1c is not breaking new ground but giving further support to 77.1c by focusing specifically on the case of intellect.

The first premise, for Aquinas, amounts to a conceptual truth about *essence* and *existence*. It therefore needs explication rather than defense. That explication comes in the sentence immediately after the first premise: "Just as a capacity is related to its operation as to its actuality, so essence is related to existence." As we saw in §5.1, capacities are a kind of potentiality, and hence are defined in terms of how they are actualized. The capacities we are considering, operative capacities, have operations as their actuality. Essence is also a kind of potentiality (type-B, in §5.1), a potentiality for existence. So we have two potentiality-actuality pairs:

- i. Essence – Existence
- ii. Capacity – Operation

The human intellect can be identified with the soul's essence only if the intellect's operation (thinking) can be identified with the existence (*esse*) of a human being. So says the first premise.

There is, in Latin, an obvious etymological link between essence (*essentia*) and existence (*esse*). For Aquinas, this linguistic link signals a conceptual link: a thing's essence is its potential for existence. The essence of a thing is its nature, as specified by its definition: "in general it is the essence of any thing, what its definition signifies, that is called its nature" (29.1 ad 4). Where corporeal things are concerned, the definition includes not just the substantial form, but also common matter: "in the case of natural things the definition signifies not the form alone, but the form and the matter" (75.4c; see §In.3). It is the formal part of the essence that is associated with existence: "in the case of things composed of matter and form, the form is said to be the principle of existing" (SCG II.54.1291). This fits with the way Aquinas characterizes substantial forms: "a substantial form brings about existence unconditionally" (77.6c; see §3.2).

Essences have existence potentially, and so they don't yield existence all by themselves. There has to be something to actualize the essence, by bringing it into existence, just as there has to be something actualizing a capacity, by stimulating its operation. Animal souls are generated by procreation (§4.1); human souls are created by God (§4.2). So just as a capacity such as intellect is potentially thinking, and gives rise to actual thought when suitably actualized by information, so an essence gives rise to actual existence when suitably actualized by some outside agent.

In effect, all of this is little more than an abstract, generalized formulation of the thesis with which this study began: that the soul is what gives

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a thing existence (§1.1). But here is where Aquinas needs to be careful. The soul has a variety of functions: it not only provides existence, but also performs the various different operations that a living thing performs. Intellect, after all, is a part of the soul. What Aquinas wants to claim is that the intellect is not a part of the soul's essence. The soul's essential nature is to be the first actuality of the body – that which gives the body life and existence: “the soul, in terms of its essence, is an actuality” (77.1c); “the soul, in terms of its essence, is the form of the body” (76.1 ad 4 (but see 76.1 ad 6)). Aquinas takes it to be a conceptual truth, then, that the intellect is part of the soul's essence only if the intellect's operation can be identified with a human being's very existence.

Understood in this way, the first premise may appear to be doing all of the work in this argument. For it seems *obvious* that the intellect is not that which makes a human being exist. To correct this impression, we need to notice that in some ways it is misleading to translate *esse* as *existence*. When Aquinas links *essentia* to *esse*, he isn't talking about existence in a strictly generic sense, as if *essentia* were simply the magic ingredient that makes the unreal become real, that instantiates the uninstantiated. Instead, the existence in question here is the more full-bodied idea of existence-of-a-certain-sort. Essence, in other words, is not responsible just for a particular thing's existence, but for its existence as a thing of that kind. Accordingly, the soul is not just the first principle of existence, but “the first principle of life” (75.1c). Aquinas is fond of repeating Aristotle's claim that “for living things, living is existing (*vivere est esse*)” (*De an.* II 4, 415b13). The point is that different kinds of entities have different kinds of existence. The essence of an entity is what gives that entity its own brand of existence.⁷

This broader interpretation of *esse* helps explain why Aquinas would insist on restricting the actualization of *essentia* to *esse*. As it turns out, *esse* covers quite a lot: apparently, it covers all and only the features that make a thing be the kind of thing that it is. And now it should begin to seem more reasonable to hold that this is precisely what an essence is. But when *esse* is understood in this full-bodied way, then it is no longer obvious that the intellect does not contribute to the existence of a human being. For it seems that the intellect plays a crucial role in being human (§4.2), and that hence the intellect (and perhaps other capacities of the soul) should be included in the soul's essence.

In short, the more one insists on the first premise's status as a conceptual truth, the more pressure one puts on the argument's second premise: “Only in God's case is his intellective operation the same as his existence.” Aquinas offers no defense of this premise in 79.1c, presumably because he had already argued for that very conclusion in 54.2c. Rather than look at that article, which argues in a highly abstract and general way that not sensory, nor volitional, nor intellectual operations can be identified with the essence of any created substance, I propose to look at the second

5.2. THE DISTINCTION BETWEEN THE SOUL AND ITS CAPACITIES

argument in 77.1c, which is explicitly formulated for creatures with souls. The conclusion of this argument is the more general one that the soul's essence is not identical with any of its capacities. But the argument is best appreciated in the context of 79.1c. Here is how it goes (omitting, for the moment, several supporting sentences):

The soul, in terms of its essence, is an actuality. Therefore if the very essence of the soul were the immediate basis of its operation, then anything that has a soul would always actually have the operations associated with life – just as anything that has a soul is always actually living. . . . One finds, however, that what has a soul is not always in actuality as regards the operations associated with life. . . . We can conclude, then, that the soul's essence is not its capacity. For nothing has a capacity [*est in potentia*] in virtue of its actuality, considered as an actuality (77.1c).

There is no explicit mention of *esse* here, but for Aquinas's contemporaries – and now for us – no explicit mention is needed. Aquinas says that “the soul . . . is an actuality”: we know that what soul brings about is *esse*. The soul makes a thing be “always actually living”: we know that for things with souls, living just is their *esse*.

The argument's crucial claim comes in the second sentence, where Aquinas asserts that the soul's essence can be the “immediate basis” only of operations that always take place. In other words, the various ingredients in *esse* must be continually present. This is a plausible requirement. If I can continue to exist without having *x*, or doing *F*, then it does not seem as if *x* or *F* should be counted as features that make me be the kind of thing I am. Now “anything that has a soul is *always* actually living,” and so being alive meets the test. But “what has a soul is not *always* in actuality as regards the operations associated with life” – this is obvious for all the operations of our intellective and sensory parts.⁸ Sometimes we are thinking, and sometimes we are not. So the operations of intellect or sense are not a part of our *esse*. Hence the “immediate basis” for these operations is not the soul's essence; in other words, the capacity responsible for these operations is not the soul's essence. God's case is entirely different, of course. He is pure actuality; his operations are eternal and unchanging. There is no distinction to be drawn, then, between God's essence and his capacities. Everything God is and does is part of his *esse*, and so all of his powers or capacities can be identified with his essence.⁹

If the soul's capacities are not identical with its essence, then those capacities must be accidents. This is true, at least, when accidents are understood along the lines inspired by the *Categories*. In this sense, everything must be either essential or accidental: these two classes are both mutually exclusive and jointly exhaustive. Capacities, on this account, must be accidents, and they fall into the category of quality (77.1 ad 5; see *QDSC* 11c). In another sense, however, the soul's capacities are not accidents. This is so when one thinks of accidents along the lines proposed by the *Topics*

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(I 5, 102a18–30), where Aristotle distinguishes species, genus, differentia, proprium, and accident. In these terms, the soul's capacities should be described not as accidents, but as *propria*: “a proprium is not part of the essence of a thing, but it is caused by the essential principles of the species” (77.1 ad 5). It will sound less odd to speak of the soul's various capacities as accidents – intellect an *accident* of the soul?! – once one realizes that these accidents are caused by the soul's essence.

The position Aquinas takes rests on a rather subtle distinction. Since the soul's essence is always actualized, for as long as the substance exists, the soul's various powers will be part of its essence only if those powers are always actualized. But those powers are not always actualized: a human being is not always actually engaged in intellectual or sensory operations. Hence these operations do not come directly from the soul's essence. They come from separate powers. Still, the possession of those powers is a prerequisite for being human (§2.1), and so a living thing does always possess the capacities themselves. Hence the capacities come directly from the soul's essence. This latter point is the explicit conclusion of 77.6c: “all the soul's capacities . . . flow from the essence of the soul as their basis.” The fact that having an intellect and senses is *essential* to being human (as we might put it) does not show, for Aquinas, that the intellect and senses are part of the soul's essence. These capacities, as he conceives them, are positioned midway between the soul's essence and its operations (see *QDSC* 11 sc 4). Only this midway status can explain why we sometimes make use of these capacities and sometimes leave them unactualized. (In §12.3 we will see how this midway status also helps Aquinas analyze the soul's immortality.)

To clarify and defend this subtle distinction, Aquinas sometimes appeals to the Aristotelian terminology of first and second actuality. When Aristotle wrote that the soul is the actuality of a physical body, he remarked that actuality “is spoken of in two ways: in one way like knowledge, in another way like contemplation” (*De an.* II 1, 412a22–23). The distinction is between merely having a capacity (e.g., having the knowledge) and actually exercising it (e.g., actually thinking about that which one knows). The soul, Aristotle concludes, is an actuality of the first kind. Aquinas refers to this distinction in an aside to the argument under consideration from 77.1c. After making the distinction between the soul's essence and its capacities, Aquinas says that “it is in this way – insofar as it underlies its own capacity – that the soul is said to be a first actuality, directed at a second actuality” (77.1c). The first actuality is simply to exist as a thing of some sort, and this sort of existence (*esse*) is precisely what the soul's essence brings about. Second actuality is the performance of some operation or another, and this is what a human being, already in first actuality, does.¹⁰ To place the soul's capacities within the essence of the soul would be to obliterate this distinction between two kinds of actuality. If our capacities were included in our essence, then our existence would entail our actually operating at all times in every way. Since human beings are not like that, the

5.3. THE BALANCING ACT

Aristotelian framework of Aquinas's theory commits him to drawing a distinction between the soul's essence and its capacities.

5.3. The balancing act

The previous section may have seemed obscure. The argument over whether the soul's essence is distinct from its capacities must take for granted a host of Aristotelian concepts: the existence of soul, the contrast between acts and potentialities, the nature of capacities, essence, *esse*, and so on. It would be natural enough to suppose that the sort of details at issue in Q77 can be put on hold until we decide on more basic questions about the merits of Aquinas's approach.

Yet we should be cautious in assuming this attitude, given that these details were among the most hotly debated questions on the soul in later scholasticism. The three most important philosophers in the half-century after Aquinas's death – Henry of Ghent, John Duns Scotus, and William Ockham – all rejected Aquinas's position and attempted to weaken, if not eliminate, the distinction between the soul's essence and its capacities. Scotus drew his characteristic formal distinction between the soul and its rational powers, rejecting any real distinction between intellect, will, and the soul's essence. Although he attributes this real-distinction view to Aquinas, it is not entirely clear how far Scotus's official conclusion diverged, in the end, from Aquinas's.¹¹ But Scotus pronounced himself willing, if not for the weight of authority, to eliminate all distinctions between the soul and its capacities.

I say, therefore, that intellect and will are not really distinct things. Moreover, it *can* be maintained that they are entirely the same in both reality and reason, or that the soul's essence, entirely indistinct in both reality and reason, is the source of multiple operations, without any real diversity of capacities.

This view, Scotus wrote, "cannot be disproved through reason," but he went on to reject it anyway, because "it cannot account for so much authority" in favor of some sort of distinction (*Reportatio* II.16 (vol. 23, p. 74)).

It is debatable just how squarely the weight of authority lies with drawing a distinction. It was common in the early thirteenth century to identify the soul and its powers, and authors who did so invoked the authority of Augustine. By the time of William Ockham, this view had once again become ascendent.¹² After introducing Scotus's official view, Ockham noted that it was defended "not because of any argument, but only because of authority." Then, in stating his own view, Ockham wrote that he supports the first account that Scotus described but would not defend. On this view, as Ockham characterized it, the soul's capacities "are really the same among themselves and with the soul's essence"; they are distinguished only by reason. Ockham managed to reach this conclusion while still upholding the authoritative texts that so influenced Scotus. He used

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his formidable semantic skills to specify an extended sense in which it is true that the soul's capacities are distinct from each other and from the soul's essence. Such claims are true when a word like 'intellect' is taken as referring not simply to the capacity itself but to the whole process of intellectual cognition, including the act of cognition. Since such acts are distinct from each other and from the essence of the soul, we can admit, in this extended sense, to even a real distinction between the soul and its powers (*Reportatio* II.20).

It would take a long and involved study to sort through this debate head-on, evaluating each of Aquinas's arguments, then the way Scotus and later Ockham replied to each of those arguments, and finally the arguments Scotus and Ockham make for their own position. As we saw in §5.2, Aquinas rests his account on some very deep and basic metaphysical principles, principles that Scotus and Ockham both rejected. This is a debate, therefore, that would prove very hard to adjudicate. Ockham recognized that very fact, and used it to his advantage. His principal argument for the identity of the soul's essence and its capacities was his principle of parsimony, Ockham's razor: "there is no point in doing something through many things if it can be done through fewer."¹³ We should allow this principle to decide the question, Ockham went on to argue, because there is no better evidence one way or the other:

Sometimes distinct operations require distinct bases and sometimes they do not. . . . But, as for when we should claim such a distinction and when we should not, one has to rely on experience or on an evident argument. But because neither is available in this case, we should not, from the fact that there are numerous operations, infer that there are numerous bases [for those operations] (*Rep.* II.20, p. 444).

Ockham's analysis is attractive. There do not seem to be any observations that could settle the matter. And, as for "evident argument," it is hard to see how any argument could count as evident that begins with the kind of deep metaphysical assumptions that Aquinas relies on. Could one ever make genuinely evident, for instance, his distinction between *esse* and *essentia*? Under these circumstances, parsimony can look like a decisive consideration.

The circumstances, however, are not quite as Ockham described them. Even if we do not insist on the specific arguments that Aquinas makes in 77.1c, 79.1c, and elsewhere, there are further considerations that should lead us to take Aquinas's distinction seriously. In particular, two of the most attractive features of his theory of human nature – (1) the unification of soul and body and (2) the account of how and why the soul subsists on its own – require Aquinas to draw a distinction between the soul and its rational powers. One can begin to see as much by noticing that Aquinas makes a series of claims in the early stages of the *Treatise* that appear to be contradictory. In 76.1c he writes that "the intellect, which is the principle of intellective operation, is the form of the human body" (76.1c).

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This solution, he eventually concludes, is “the only way that is left” to explain how the intellect’s operation can be my operation (§3.2). But the solution, Aquinas recognizes, faces a serious objection:

Every form is determined by the nature of the matter whose form it is; otherwise no balance would be required between matter and form. Therefore if the intellect were united to the body as its form, then, since every body has a determinate nature, it would follow that the intellect would have a determinate nature. And then it would not be capable of cognizing all things, as is clear from earlier discussions, which is contrary to intellect’s nature. Therefore the intellect is not united to the body as its form (76.1 obj. 2).

The reference to “earlier discussions” is to 75.2 in particular. There he had argued for the rational soul’s subsistence on the basis of its independence from matter (§2.2). Here the objector claims that this independence from matter makes it impossible for the intellect to be the form of the body. Aquinas replies “it is enough for the intellective power not to be the *actuality* of the body” (*ST* 1a 76.1 ad 2–3). This reply should strike us as highly mysterious, given the body of the article’s affirmation that the intellect is the form of the body. How can something be the form of *y* without actualizing *y*?

There may seem to be no good answer to that question, since to be a form just is to actualize a thing. Compare the *De unitate intellectus*: “Everything acts insofar as it is in actuality. But everything is in actuality through its form. Consequently that by which something first acts must be its form” (3.38–40 [216]). But later in that same treatise, Aquinas states his case more clearly: “We do not say that the human soul is the form of the body with respect to its intellective power, which . . . is not the actuality of any organ” (3.378–81 [233]). Despite 76.1, it makes no sense to claim without qualification that the intellect is the form of the body, and at the same time to deny, without qualification, that it is the actuality of the body. But that, of course, is not Aquinas’s position. He wants to say that the rational soul is the form of the body, in one respect, and not the form of the body, in another respect. As regards its essence, the soul precisely is the form or actuality of the body. But intellect, the soul’s intellective capacity, is neither the form nor the actuality of any body.¹⁴ Without a distinction between the soul and its capacities, Aquinas could not make these claims.

More precisely, Aquinas could not maintain these claims without moving toward a plurality of substantial forms (see §4.4). Authors like Scotus and Ockham could deny any real distinction between the soul and its powers because they could distinguish between the different forms that compose the soul. There is room to identify intellect and will with the rational soul if one allows a further substantial form within the soul that actualizes the body. Peter John Olivi took this line, and extended it to its logical conclusion, arguing that it is “not only contrary to reason but also dangerous to the faith” to hold that “the [soul’s] intellective and free part is the form of

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the body per se and considered as such" (*II Sent.* Q51; II 104). In 1312, the Council of Vienne condemned this view, and declared it a heresy to hold that "the rational or intellective soul is not per se and essentially the form of the human body" (Denzinger 1967, n. 902). From that time forward, all the way into the early modern period, Catholic philosophers were careful not to contradict this ruling, but were often frankly puzzled about how these tensions could be reconciled. Just as much as medieval philosophers faced a mind-body problem, they faced a mind-soul problem: if soul is form and mind is immaterial, then how do the two relate?¹⁵

Aquinas's answer to this question faces trouble on several sides. At the same time that he wants to resist a plurality of substantial forms, he also wants to keep the intellect as a part of the soul, and wants to insist that the soul is the form of the body. The threat lurking here is Averroes's monopsychism: the view that all human beings share a single intellect. Odd as this claim sounds, it is easy to see how some of Aquinas's contemporaries, such as Siger of Brabant, arrived at that result. For if, like Aquinas, one distinguishes between (1) the soul conceived of as the body's form and (2) the soul conceived of as intellect, then the intellect threatens to fly apart entirely from the soul. Thus Siger argues in his *Questions on De anima III* that "the intellect perfects the body not through its substance, but through its power" (Q7) – which is simply to say that the intellect cannot be the substantial form of the body, but must be merely a power somehow associated with the body. This result is what leads him, two questions later, to the conclusion that "there is a single intellect in all, not multiplied by the number of human beings" (Q9). He notes that "if the intellect *were* the perfection of the body through its substance, then there would be no question of whether the intellect is multiplied" (p. 27).

In the face of Siger's appalling conclusion, it is no wonder that so many later scholastics would simply deny the distinction between the soul and its powers and then invoke a plurality of substantial forms. Rather than take this safe route, Q77 strikes a delicate and precarious balance between opposing pressures. A human being has but one substantial form, its soul, which is the form of the body. The intellect is not identical to this soul, but it is a part of the soul, and flows from the soul's essence. These and other subtle distinctions all have a vital role in safeguarding fundamental features of Aquinas's account.

5.4. An Aquinian circle?

All of the soul's capacities are accidents, more specifically propria (77.1 ad 5). There are no free-floating, independently existing accidents in the natural world – though the case of the Eucharist shows that such a thing is supernaturally possible (3a 77.1) – and so all accidents must have a subject. Here we arrive at one further important difference between the soul's capacities. Those capacities that operate without a corporeal organ

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(intellect and will) have the soul's essence as their subject. The remaining capacities, which make use of a bodily organ for their operations, have the whole human composite, body and soul, as their subject. "The subject of the soul's capacities is either the soul itself alone . . . or the composite" (77.6c).

This state of affairs is highly unusual. Among forms that actualize matter, the human soul is the only one that has accidents in its own right, accidents that belong to the form itself as their subject. In the case of every other material substance, the accidents intrinsic to the substance have the whole composite as their subject. The soul's unusual status in this regard is a consequence of the key premise of 77.5c: "a capacity must belong to that, as its subject, to which its operation belongs." Among material substances, only human beings possess a substantial form that has its own operations. It was precisely this feature of the human soul that led Aquinas to describe the human soul as subsistent (75.2) and hence imperishable (75.6). No other souls are subsistent in this way (75.3), and it goes without saying that no nonliving material substances have subsistent substantial forms. So because the human soul is subsistent, it has the highly peculiar feature of being the form of matter, and at the same time being the subject of accidents. "The human soul is a subsistent form and not pure actuality, *and so* it can be the subject of certain capacities – namely, of intellect and will" (*QDA* 12 ad 16).

At this point, however, it can appear that Aquinas has been arguing in a circle. To see the potential problem, we need to go back to 75.2, the crucial article which establishes the subsistence of the human soul. Although the conclusion of that article refers to the soul, the argument is based entirely on facts about intellect. The key premise is that the intellect "has an operation on its own, which it does not share with the body" (75.2c). Aquinas, with one eye on the distinction he will draw in 77.1, recognizes that he cannot simply identify soul and intellect, and so he states his conclusion carefully: "It is necessary to say that the *principle* of intellectual operation, which we call the soul of a human being, is an incorporeal and subsistent principle" (75.2c). The strategy here is reminiscent of the Five Ways (2.3c), where Aquinas tries to prove God's existence before having specified anything about God's nature. Aquinas cautiously concludes each of the Five Ways with variants of the phrase ". . . and we call this God." In 75.2c he has to make a similar move. Since he has not yet established the relationship between the human soul and the intellect, he applies facts about the intellect to the human soul, taking for granted that the soul is "the principle of intellectual operation." That is what "we call the soul," which is to say that this is an assumption on which there is widespread consensus.

Such a strategy is perfectly appropriate at the start of the Treatise, just as it was appropriate at the start of 1a, in proving God's existence. The consensus to which Aquinas refers might of course turn out, on closer inspection, to be mistaken. But one has to start somewhere, and one cannot

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prove everything at once. So it is appropriate to make certain assumptions at the outset, as long as those assumptions are eventually discharged. In this case, the assumption that Aquinas makes in 75.2 and must eventually discharge is that the intellect is somehow based in the human soul, in such a way that facts about the intellect can be applied to the soul as well.¹⁶ It is easy to suppose that this is a fairly trivial assumption, one easily discharged. We are accustomed to treating soul and mind as virtually interchangeable, and it seems a small jump to the thought that soul and intellect are also virtually interchangeable. For an Aristotelian, however, such claims can be highly problematic. On the one hand, the hylomorphic treatment of soul and body pushes us toward thinking of the soul as a merely material form, analogous to the form of a statue. On the other hand, Aristotle also encourages us to think of the intellect as somehow separate from matter and eternal. Despite our natural tendency to link soul and intellect, then, there are considerable pressures on an Aristotelian to pull the two apart. Aquinas is not entitled to assume that facts about the intellect can be parlayed into facts about the soul.

This brings us to Q77, and to the threat of circularity. When Aquinas distinguishes the soul's essence from its capacities in 77.1c, he is thereby able to explain how the soul can both actualize the body and be separate and independent from the body. This is, as we saw in §5.3, a key part of Aquinas's strategy for reconciling hylomorphism with the soul's subsistence. But once he denies that the intellect is a part of the soul's essence, it becomes all the more feasible for intellect to fly away entirely. How do

Separable, unmixed

It has always been tempting to read Aristotle as having treated at least the agent intellect as something separate from the soul. Thus Michael Frede writes, "It is open to us to assume, following in this a long tradition of interpreters, that this active intellect is not a human intellect, that it is not an integral part of the human soul" (1992, p. 105). Aquinas was of course well aware of the long line of interpreters to which Frede refers; he wrote that "almost all the [non-Christian] philosophers" subscribed to this view (II *SENT* 17.2.1c). Included on the list would be Alexander of Aphrodisias (*De intellectu*), Avicenna (*Liber de anima* V.5), and Averroes (*Commentarium magnum de anima* III.18–19). (See Brentano 1992.) Aquinas argues at length against this position, both as a reading of Aristotle and as a philosophical view in its own right. In addition to 79.4–5, see, in particular, his *On the Unity of the Intellect Against the Averroists*, written several years after the Treatise.

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we know that the intellect is a part of the soul at all, or even part of a human being? Perhaps we should take the intellect's subsistence to show not that the soul is immortal, but that the intellect is not human. Aquinas needs somehow to pin intellect down.

He does so in 77.5 by arguing that the intellect exists in the soul as its subject. But when one looks at the argument there, it begins to look as if Aquinas is arguing in a circle. Here is the heart of the argument he makes:

It is clear from things said above that *the soul* has some operations that are carried out without a bodily organ: in particular, the operations of intellect and will. Consequently, the capacities that are the bases of these operations exist in the soul as their subject (77.5c).

The reference to "things said above" is apparently to 75.2 (or so editors and translators generally assume). But in 75.2 Aquinas establishes only that the *intellect* has nonbodily operations. As we have seen, he supposes that these results hold for the soul, too, inasmuch as "we call the soul" the basis of intellectual operation. But this supposition still needs to be discharged, and there is nothing helpful in 77.5.

The same is true of 77.6, where Aquinas argues that all of the soul's capacities flow from its essence, as their cause. Here Aquinas takes for granted the intellect's status as a capacity of the soul and (naturally enough) takes for granted 77.5's conclusion that the intellect has the soul itself for a subject. The only consideration advanced in support of the intellect's status as an accident of the soul is the fact that "the soul itself alone can be the subject of an accident inasmuch as it has some degree of potentiality" (77.6c). But this claim is ultimately based on the fact that the soul is subsistent (see 75.5 ad 4), and so once again Aquinas seems to be moving in a circle. The soul is subsistent, if the intellect is a part of the soul; the intellect is a part of the soul, if the soul is subsistent.

The problem, in short, is that Q75 seeks to reach general conclusions about the human soul, but can reach those conclusions only by assuming that the intellect is a part of the soul. In turn, Q77 can reach its conclusions about the place of intellect only on the basis of Q75. If one takes for granted that the intellect is a part of the soul, then the problem disappears. But that is something no Aristotelian can take for granted.

Aquinas has a way out of this circle, however, and it comes in 76.1, which here as elsewhere turns out to be the linchpin of the Treatise. At first glance, Q76 looks unlikely to be helpful, given that the subject matter of the question is "the soul's union with the *body*" (76pr). That, of course, is not the result we need; we need to be shown how the soul is united with the *intellect*. But this article nevertheless contains just the argument Aquinas needs. The conclusion he reaches here is that "this principle through which we first intellectually cognize, whether it be called intellect or the intellectual soul, is the form of the body" (76.1c). Several things are noteworthy about this conclusion. First, Aquinas explicitly leaves open the

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status of this principle of intellective cognition. Perhaps it is identical with the soul's very essence; perhaps it is a part of the soul in some as yet unspecified way. Those details can be left to Q77. Second, Aquinas is not arguing that the human soul, considered as the first principle of life, is the actuality of the body. If that were the claim then the circularity would be unavoidable, because we would have no way of connecting intellect and soul. Instead, Aquinas focuses all of his efforts on establishing that the principle of intellectual thought must be the form of the body. This conclusion is in turn based on what Aquinas regards as the undeniable fact that each one of us has our own thoughts (§3.1). The strategy, in essence, is to establish the unity of soul and body by focusing on the hardest case, that of intellect. If he can show that *intellect* and body are unified, then the same can be shown, straightaway, for the rest of the soul.

So the conclusion of 76.1 must be formulated carefully. If Aquinas had tried to argue simply that the soul is united to the body as its form, intellect would have been left out of the picture. If he had tried to argue that the intellect is united to the body as its form, then he would have lost the ability to draw the distinction of 77.1 between the soul's essence and its powers. His solution is to argue that the *principle* of intellective cognition, whatever that may be, is the form of the human body. This way of putting the argument allows Aquinas to associate intellect with the soul, while at the same time leaving open the exact nature of that relationship. On the one hand, by establishing that this "principle" is the substantial form of the human body, 76.1 forces us to identify this principle with the soul. (The soul, after all, just is the substantial form of the body.) On the other hand, by focusing on the principle of intellective cognition, 76.1 insures that this principle, the soul, has intellect as one of its capacities. What looks like a puzzling circumlocution – "the principle of intellective cognition" – turns out to be an essential move in the argument.

In this way, 76.1 not only establishes the unity of body and soul, but also ties down that notorious loose cannon of Aristotelian psychology, the intellect. With intellect firmly bound to the deck, Aquinas can proceed to derive the fairly immediate corollary that "it is altogether impossible and absurd to claim that all human beings share a single intellect" (76.2c).¹⁷ Then, in Q77, he goes on to establish precisely how intellect and soul are related, taking for granted that the intellect is a part of the human soul, not something separate and shared. So the conclusions of 77.5–6 are not intended to bear as much weight as one might at first suppose. The real heavy lifting occurred back in Q76; Q77 simply works out the details.

5.5. The hidden essence of soul

In §5.3, I offered an indirect justification for Aquinas's distinction between the soul's essence and its capacities; the approach was indirect inasmuch as it focused not on Aquinas's explicit arguments for the distinction but on the crucial work the distinction does behind the scenes. In this section I

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want to look at another way in which this distinction serves Aquinas's purposes. Here the advantage is methodological. It is one of the guiding epistemic principles of Aquinas's work that intellect has as its "first and proper object" the nature (= essence, quiddity, *quod quid est*) of material things (85.5c; see §10.1). At the same time, Aquinas believes that these essences are concealed from us, even inaccessible: "the essential principles of things are unknown to us" (*InDA* I.1.254–55). Because the soul's capacities are distinct from its essence, and yet flow from that essence, Aquinas views the study of these capacities (the subject of QQ77–83) as our best source of information on the soul's illusive nature (see §11.1).

Aquinas often expresses this apparent skepticism about our knowledge of essences in terms of our inability to know the differentia of a species: "substantial differentiae are not known to us, or do not even have names" (29.1 ad 3). Since the differentia, together with the genus, constitutes a definition (e.g., rational animal), and since definitions pick out the essence of an object (§In.3), this is another way of saying that we do not know the essences of things. The issue gets raised in the Treatise when Aquinas considers an objection to his distinction between the soul's essence and its capacities. Isn't *rational* a differentia, the objection argues, and isn't it obviously a reference to the soul's rational powers? Therefore aren't those powers a part of the soul's essence? (77.1 obj. 7) Aquinas replies:

Rational and *sensible*, considered as differentiae, are not taken from the capacities of sense and reason, but from the sensory and rational soul itself. Nevertheless, because substantial forms, which are unknown to us in their own right, become known through their accidents, nothing stands in the way of accidents at times taking the place of substantial differentiae (ad 7).

Aquinas makes two different replies here. First, he denies that the differentia *rational* makes reference to the rational powers. Instead, it refers to the "rational soul itself" – that is, to the essence of the soul, which is (as 77.5–6 will show) both the subject and the source of the rational powers. Second, he makes the alternative (but complementary) reply that these apparent differentiae, *rational* and *sensible*, do not genuinely define the soul at all, and are merely accidental attributes (albeit propria), just as the property of being two-legged does not define what it is to be human (see *QDSC* 11 ad 3). We must at times rely on such accidental attributes, he says here, because substantial forms are *unknown to us in their own right*. Elsewhere he indicates that we "frequently" rely on accidents in place of substantial forms (e.g., 1a2ae 49.2 ad 3). It is no wonder, then, that the names of the different kinds of souls are taken antonomastically from their leading capacities – nutritive, sensory, rational (see 79.1 ad 1).

This apparent skepticism about our knowledge of essences is surprising, for several reasons. First, QQ75–76 are devoted to "characteristics of the soul's essence" (75 pr). If that essence is unknown, then what was accomplished in those initial questions? Second, as noted, the essences of objects are the proper object of intellect. Indeed, Aquinas seems to

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place no limits on our ability to grasp such objects: "It is clear that through the intellect a human being can have cognition of the *natures* of all bodies" (75.2c; §2.2). Moreover, the intellect cannot even be in error, as regards its initial apprehension of an object's essence (85.6; §10.5). All of this would seem to leave little room for the skepticism that Aquinas seems to display.

In part these puzzles can be solved by noting that knowledge of an essence is not an all-or-nothing affair (see Jenkins 1991, Kretzmann 1992). One can know something about the essence of an object without completely understanding that essence. We can say about the soul, then, that Aristotle *has* successfully defined it as the first actuality of a natural body potentially having life (*De an.* II 1, 412a27). But to say that this definition is successful is not to say that it tells the whole story about the soul's essence (see p. 143). It is, instead, a starting point, a schematic study, accurate as far as it goes. It is precisely the intellect's job to formulate such rough accounts, and the job is one that the intellect is very good at. But none of this implies complete success, and Aquinas is clearly not overly optimistic: "our cognition is so weak that no philosopher could have ever completely investigated the nature of a single fly" (*In symbolum*, pro.).

What does Aristotle's definition of the soul leave out? To begin with, it entirely leaves out an account of the material component of the human essence. If the goal is a general theory of human nature, then it is not enough just to describe the soul: as noted earlier (§§In.3 and 5.3), the essence of a material substance includes not just the substantial form, but the general features of its matter (its common matter, to use the terminology of 75.4c). So an account of human nature that leaves out flesh and bones, to say nothing of brain and heart, must be incomplete: "in the case of every form that is in determinate matter, if the matter is not contained in its definition then that definition is inadequate" (*InDA* I.2.181–84). The fact that philosophers (read: scientists) were unable to know the nature of a fly is in part a consequence of their limited knowledge of fly anatomy, fly biochemistry, fly neuroscience, and so on. But although Aristotle's definition leaves out the matter, this is not a problem for Aquinas's theological (here read: philosophical) account. He is not interested in a general account of human nature, but in "the nature of human beings with reference to the soul" (75pr; see §In.4). Thus the topic of QQ75–76 is the soul's essence, not the essence of human beings. Accordingly, a definition of the soul that leaves out the matter is perfectly appropriate for the Treatise.

There is a more relevant respect in which Aristotle's definition of the soul is limited and schematic. A satisfactory definition, as both Aquinas and Aristotle conceive of it, must do more than illuminate the object's essence. The definition must also show how the object's various accidental properties flow from that essence:

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In *Physics* IV,¹⁸ the Philosopher says that in any case where someone attributes a definition or nature to something, that attribution, if it is adequate, will apply to how that thing operates and is affected. For what a thing is is best defined when we have cognition not only of the thing's substance and nature, but also of its accidents, and how it is affected (*InDA* I.9.82–89).

Here Aquinas is developing Aristotle's criticism of those who defined the soul in terms of harmony. How can we explain any of the soul's operations or capacities in such terms? How can thought, for instance, be a product of harmony? One might, of course, ask a similar question about Aristotle's definition. Aquinas would concede that the first actuality account is only a start. But it is at least a start. The language of act and potentiality gives us a way of understanding the soul and its relationship to its capacities; what is left to be filled in are the details. The various articles of Q77 should be understood as attempts to fill in these details: that there is more than one capacity (77.2); that some capacities have the soul as their subject, whereas others have the whole compound (77.5); that they all "flow from the soul's essence" (77.6). These are just the first steps down a long road – but that is how human knowledge always develops (§§10.4 and 10.5). Often in the Treatise, Aquinas simply argues that something must be the case, without explaining how it happens. There is no account, for example, of how the soul's powers have the soul as their source, or of how those powers emerge by what he calls a "natural outcome" (77.6 ad 3). These gaps reflect our inability to reach a full understanding of the soul's essence. A complete account would fill in even such gaps.

These considerations help to explain further the significance of Aquinas's distinction between the soul's essence and its capacities. The study of those capacities forms a critical part of the Treatise, because they provide the best means of insight into human nature – even if, strictly speaking, these capacities are not part of that nature. If we were able to grasp in full the soul's essence then we could stop right there: from that sort of complete understanding of an essence we could read off all of the attributes that flow from that essence.

If the essential principles were rightly defined and could be cognized then the definition would not need the accidents. But because the essential principles of things are unknown to us, we must thus use accidental differentiae in designating the essential ones (*InDA* I.1.252–57).

Here again, we can see why Aquinas is so dubious about our ability to grasp the complete essences of things. The complete understanding of an essence would reveal how an object's proper attributes flow from that essence. It remains difficult to imagine, even today, that we might attain that sort of understanding. We may know the complete genetic makeup of a fly, but can we explain how, based on those genes, the fly develops its wings, legs, and so on? A true knowledge of the essence of a fly would reveal even that.

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We are now at the brink of the very deepest level of Aquinas's metaphysics. I argued in the *Excursus* to Part I that a deeper understanding of his metaphysics leads to the view that all substances, material or immaterial, are simply bundles of actuality, organized around a single essence or substantial form. In light of this chapter, we can go further and say that these "bundles" can be analyzed at an even more basic metaphysical level in terms of the essence itself. (Here the image of a bundle begins to be more misleading than helpful.) A thing's essence is distinct from its various properties, but those properties supervene, as we might put it, on the thing's essence. In a fascinating question from *De veritate*, Aquinas explains that this holds true at two degrees. At the first, general degree, "an intellect cognizing the essence of a species comprehends through that essence all of the per se accidents belonging to the species." The same principle holds true at a second, individual degree: "once the proper essence of a singular is cognized, all of its singular accidents are cognized" (*QDV* 2.7c). Aquinas hastens to add that human beings cannot possibly attain this second degree of comprehension. But from the deepest metaphysical perspective, all of my various properties, necessary and accidental, flow from my own distinctive essence. Hence God, who understands that essence, understands everything about me, past and future.

Having come to this brink, I don't propose to go any farther.¹⁹ Aquinas has little to say about his deepest metaphysical level, presumably because he thinks there is little we can say. Our knowledge of essences is limited, and so our working methodology must be to put the real essences of things to one side, in favor of those superficial features that point us in the direction of essences. Hence we approach the soul indirectly (see §11.2), through its capacities (*QQ*77–83) and its operations (*QQ*84–89).

Still, a question remains about why Aquinas would claim, repeatedly and without qualification, that essences are "unknown" to us. We have seen why Aquinas should regard it as extremely difficult to reach a complete understanding of essences. But it seems odd, or at least misleading, that he would express that point by asserting the absolute unknowability of essences. It seems odd as well, if this is his point, that he would rule out the possibility of our eventually reaching a complete grasp of at least some essences. He says that no one "could have ever completely investigated the nature of a single fly," but why would he extend this claim into the future tense?

One might suggest that these remarks apply only to our knowledge of individual essences, not to the generalized essence of a species. He speaks, after all, of not knowing the nature of a *single* fly (*unius muscae*). But if this is the point, it is peculiar that Aquinas never says so. Moreover, there are many places where it is fairly clear he has in mind essences of the ordinary, generalized sort. In his commentary on *De generatione*, for instance, Aquinas interrupts his sentence-by-sentence gloss of the text with a lengthy discussion of why Aristotle describes cold and hot as the *differantiae* of earth and fire, respectively (*InGC* I.8.62; see *De gen.* I 3, 318b16).

These cannot be the substantial *differentiae*, Aquinas argues: cold is not the essence of earth, nor hot the essence of fire. As for what the actual essences are, Aquinas writes that “substantial *differentiae* are unknown.” But here is a place where the claim seems oddly and uncharacteristically dogmatic. If Aquinas means that such knowledge is never attainable, surely he is wrong. Surely scientists have by now discovered the essence of fire and earth.

The impression of dogmatism is mistaken; it stems from a misinterpretation of his words. When he says that our essences are “unknown” to us, he almost always uses the adjective *ignotus*. He is careful to use this word, rather than his various other terms for knowledge and cognition, because *ignotus* has the connotation of knowledge by acquaintance.²⁰ Essences are unknown to human beings in the sense that we have no way of directly grasping them. In general, essences are not perceptible: “no substantial form is sensible per se; such forms can be grasped only by intellect” (*InDA* II.14.295–96). Even in our own case, we cannot directly apprehend our own essences: “our possible intellect has cognition of itself through an intelligible species . . . but not by directly intuiting its own essence” (*InDA* II.6.177–79; §11.1). In each passage we do reach an understanding of essences; we simply do not do it *directly*.

When Aquinas asserts that the essences of things are in this way unknown (*ignotae*), he intends an implicit contrast between our cognitive

Intus legere

It was a commonplace among the medievals to claim that the Latin word for intellect, *intellectus*, is derived from *intus legere*, to read within (2a2ae 8.1c, *QDV* 1.12c, etc.). This grounds Aquinas’s standard spatial heuristic for conceiving of the relationship between a thing’s essence and its accidental properties. We are to visualize essences as lying hidden in the innermost part of their objects, surrounded on all sides by accidental features. The difference between sense and intellect is that “sensory cognition is occupied by *external* sensible qualities, whereas intellectual cognition *penetrates* all the way to the thing’s essence. . . . *Beneath* the accidents lies the substantial nature of things” (2a2ae 8.1c). The angels are capable of seeing straight into the essences of things: “just as we, without inference, cognize first principles by a simple intuition, so too do angels, with respect to *all* of the things that they cognize” (*QDV* 8.15c; see §§10.4 and 10.5).

The role of spatial imagery here illustrates the general role that phantasms – sensory images – play in thought. We will see in §9.3 how Aquinas argues quite generally that human beings are incapable of conceiving anything without relying in this way on phantasms.

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situation and that of the angels. The clearest passage I have found to this effect comes from his *Sentences* commentary:

The term 'intellect' implies a cognition that attains the innermost aspects of a thing. Thus whereas the senses and imagination are occupied with accidents, which, so to speak, surround a thing's essence, the intellect attains its essence. . . .

But there are different ways of apprehending this essence. For sometimes the essence is apprehended through itself, not so that the intellect comes to it on the basis of things that, so to speak, surround that essence. This manner of apprehension belongs to the separate substances, and so they are called intelligences.

Sometimes, on the other hand, one reaches a thing's innermost aspects only through its surrounding features – these being its entryways, so to speak. This is the manner of apprehension in human beings, who come to a cognition of a thing's essence on the basis of its effects and proper attributes (III *SENT* 35.2.2.1c).

Aquinas says clearly and repeatedly here that we *do* reach an understanding of essences. His point is that we do not do so directly, because unlike angels we have no immediate acquaintance with the essences of things. The best human beings can do is to approach a thing's essence from the outside in, by beginning with superficial effects and accidents, and working toward an account of what the essence itself must be like. A study of human nature must focus on the soul's capacities because they are closer to the surface. This key methodological conclusion requires distinguishing the soul's essence from its capacities.

Sensation

Aquinas's treatment of the senses is brief but interesting (§6.1). The senses, on his account, were designed by nature to detect certain features of the environment. In analyzing the senses he makes teleological assumptions, but not necessarily ones that we would find unacceptable (§6.2). His account begins with the objects of sensation and works toward a characterization of the capacities on which these objects make an impression. The function of the five external senses is defined in terms of the sensible qualities that they perceive: white, sweet, and so on (§6.3). But because animals need to do more than discriminate between different colors or different flavors, there must be further, internal sensory capacities, including a common sense that makes comparative and second-order judgments, but does not account for consciousness (§6.4).

6.1. Does Aquinas have a theory of sensation?

A cursory inspection of the Treatise reveals that Aquinas does not think it very important to consider the senses. These topics are covered in the space of two articles (78.3–4), only the first of which is devoted to what we count as the senses – namely, the five external senses (78.3). Even the seemingly uninteresting powers of the nutritive soul (the powers for nutrition, growth, and reproduction) receive an article's worth of attention (in 78.2). In contrast, the appetitive powers are the subject of four whole questions (QQ80–83), and the intellective capacity is the subject of the thirteen articles of Q79. Moreover, when Aquinas turns to the soul's operations, his entire attention turns out to be focused on the intellective and appetitive capacities. All of QQ84–89 is dedicated to the operations of intellect. And almost all of the huge second part of *ST* (both 1a2ae and 2a2ae) is dedicated to exploring different aspects of the operations of our appetitive capacities, both sensory and rational (see the outline on p. 18).

The difference between Aquinas and Aristotle is stark. Aristotle devotes by far the largest section of the *De anima* to sensation; his remarks on intellect, in contrast, are sketchy and brief. Moreover, Aristotle offers further separate treatments of the senses in the *Parva Naturalia*, whereas intellect never again receives his extended attention. For Aquinas, this difference is just what one would expect from a theologian versus a philosopher. It is the task of the philosopher to consider all aspects of nature, including human nature, but especially those aspects of nature that are corporeal.

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The theologian's interest in human nature is more narrow, as Aquinas explicitly tells us. In the prologue to Q84 he announces:

Next we must consider the soul's acts, at least with respect to the intellective and appetitive capacities. For the soul's other capacities do not directly concern the investigations of the theologian.

The senses, then, are not the direct concern of the theologian. But why? The reason cannot be that they are too mundane, too much associated with the body, too far removed from God. For it is the responsibility of the theologian to consider the sensory appetites, which are bodily capacities just as much as the senses are. The appetites, however, are directly connected with virtue. As he writes in 78pr, "a theologian, in his investigations, has to be concerned with making a specific inquiry only into the intellective and appetitive capacities; it is here that the virtues are found." In themselves, the senses are not the subject of virtue (see 1a2ae 56.5) and so they are given cursory treatment in Q78, grouped along with the nutritive powers among those capacities that "come before intellect" (78pr).

I have already discussed the reason why Aquinas thinks a theological investigation of human nature should be governed by a focus on the virtues. What might strike a modern reader as a decidedly unphilosophical focus can, in the end, be explained on entirely philosophical grounds (§In.5). For the purposes of this chapter it is important only that we refrain from making the assumption that Aquinas's brief treatment of the senses in the Treatise implies that he has little to say about the senses in general. (Cf. Anthony Kenny: "when he [Aquinas] talks of the five senses . . . he has comparatively little of philosophical importance to teach . . ." (1993, p. 31).) On the contrary, Aquinas is not so much of a theologian that he neglects the senses entirely. And he is too much of a philosopher (in our modern sense of the term) to let so interesting a subject pass without study. It is true, however, that Aquinas's theological focus (in his sense of the term) leads him to pay less attention to the senses than a modern reader would expect. As a result, no other aspect of his thinking about human nature is so heavily indebted to earlier thinkers, particularly to Aristotle and Avicenna. Here, much more than in other chapters, Aquinas's contribution seems to consist largely in synthesizing the ideas of others.

6.2. Functional analysis

Not all of Aquinas's views on sensation can be gleaned from the Treatise, but the relatively brief remarks he makes here can help focus our attention. We should notice, first, that the explicit aim of both 78.3 and 78.4 is to establish the appropriate way of distinguishing the senses. This might seem to be a quite limited topic, and to preclude discussion of central questions about the way the senses function and what the senses have for their

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objects. But in fact Aquinas believes it is precisely by addressing these latter questions that one can establish the appropriate distinctions among the senses. This is a consequence of 77.3, which held that capacities in general are distinguished in terms of actions and objects. Aquinas might simply have taken that conclusion for granted in Q78, in which case he could have immediately turned to distinguishing the sensory powers by working out the relevant differences among sensory actions and objects. This is not a trivial task, as we will see in §6.3.2, because it is not at all obvious which differences among actions and objects are relevant. But even before beginning that task, Aquinas reevaluates the basic assumption that the sensory capacities should be distinguished in this way.

Aquinas begins his reply in 78.3 by noting that there have been other proposals for distinguishing the five senses. He mentions three in particular:

Some have wanted to derive an account of the distinction and the number of the external senses from the *organs*, in which one of the elements is predominant (water, air, etc.).

Others have looked to the *medium*, either connected or extrinsic ([the latter being] either air or water, or both).

Still others have looked to the different *nature of the sensible qualities*, according to whether it is the quality of a simple body or the result of a mixture.

Aquinas is not interested in whether any of these proposals might in fact give us a workable set of necessary and sufficient conditions for distinguishing the external senses. For all he says, one might be able to draw a precise fivefold distinction on the basis of differences in organs, or the medium, or the differing natures of the sensible qualities. Regardless of whether any of these proposals happens to match our customary sensory taxonomy, none of them offers an adequate explanation of *why* there are five distinct senses.

Aquinas quickly rules out the third of these proposals. The differing natures of the sensible qualities could not be the reason why there are different senses, because the senses are not at all concerned with the *natures* of things: "it belongs not to sense but to intellect to cognize the natures of sensible qualities." One might look to the natures of objects to explain something about the human intellect, but the point is irrelevant to the senses.

Aquinas rejects the first two proposals on the grounds that they get the explanatory order backward:

Capacities do not exist on account of *organs*, but organs on account of capacities. As a result, the different capacities do not exist on account of the different organs; instead, nature has established this difference in organs so as to match with the difference in capacities.

Likewise, [nature] has assigned the different *media* to the different senses according to what was right for the acts of the capacities.

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Our five different external sensory capacities cannot be explained by a difference in organs or media; on the contrary, the difference in organs or media is explained by the difference in capacities. Nature has provided different organs – eye, ear, tongue, and so on – so as to make possible the different capacities. The same is true for the different media through which sensation takes place. Think here not just of air and, for some animals, water, but also of the media that are “connected” to us. The skin, for instance, is not the organ of touch, but a medium through which the tactile impression passes.¹ All such media have been assigned by nature for the sake of our sensory capacities.

These explicitly teleological remarks – explanations in terms of the goal for the sake of which a thing was done – help to clarify the rather vague claims that Aquinas made back in 77.3c, in asking how the soul’s capacities are distinguished. There he began the reply with these words:

A capacity, considered as a capacity, is directed [*ordinatur*] at an act. Consequently, one must derive one’s account of a capacity from the act at which it is directed. . . .

It is not entirely clear what Aquinas means when he speaks of capacities (or, more generally, potentialities) being directed or ordered to acts (actualities). By putting his remark in the passive voice, Aquinas obscures the status of his claim, leaving open at least two possibilities. First, it might be a teleological claim. (But if so, then *who* or *what* is doing the directing?) Second, it might be merely the conceptual point that any talk of a capacity must make reference to some activity that it is the capacity for. The reply to the first objection of 77.3 highlights this ambiguity. That objection reasoned that capacities could not be distinguished by actions because it is capacities that are prior. Aquinas replies:

An act, although posterior to the capacity in existence, is nevertheless prior *in intentione et secundum rationem* – just as an end is, for an agent (77.3 ad 1).

Aquinas concedes that the capacity must exist before the act. But *in intentione et secundum rationem*, the act is prior. What does this Latin phrase mean? By *secundum rationem*, Aquinas means something like *conceptually*, which suggests the second, conceptual reading above. The phrase *in intentione* might mean much the same thing; the words *intentio* and *ratio* are sometimes synonyms. But *in intentione* might also mean *in plan* or even *by design*, a translation at least suggested by the way Aquinas finishes the sentence. That would point to the first, teleological reading.

Judged in light of 78.3c, it becomes clear that we should endorse not just the conceptual reading, but also the teleological reading. There does seem to be a sense in which capacities are conceptually prior to acts. One can specify an action without specifying a capacity that produces the action (e.g., let’s talk about walking); in contrast, no capacity can be specified without making reference to an action (e.g., let’s talk about her amazing

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capacity . . .). In 78.3c, however, Aquinas makes it clear that he is looking not just for this weak sort of conceptual priority, but for a stronger explanatory priority. He wants a way of distinguishing the senses that would explain *why* we have five of them, as opposed to six or four. And the conceptual priority under discussion will clearly not provide an explanation of this more robust sort. If the question is why we have five senses, it is not enough to appeal merely to the fact that we have five sensory operations. One might just as easily, and to no better effect, reason that we have five sensory operations because we have five senses. There is no asymmetry at the merely conceptual level that would be strong enough to ground a genuinely explanatory account of why we have the capacities we in fact have. Consequently, Aquinas appeals to teleology, or to final causes:

Next, . . . Aristotle asks why there is more than one sense. This, however, is something connected with the whole species, and in these cases a final cause should be given (*InDA* III.1.245–48).

The appeal to final causes is an appeal to teleology. In this case, capacities are distinguished in terms of actions because the different capacities were constituted by nature for the sake of the different actions.

Aquinas here distinguishes the soul's capacities in terms of their *functions* – that is, in terms of the purpose or role that the capacities play. Although we will see that Aquinas's own teleology rests on controversial theological presumptions, there is nothing very controversial about appealing to the function of capacities (or of organs, behavior, or tools).² Indeed, such teleological assumptions are widely accepted today precisely because they seem to offer the best explanation of *why* something exhibits the capacities (organs, behaviors) that it does. We can easily agree with Aquinas, then, that we have five senses because each of these senses has a certain purpose or function. We can also agree that the alternatives rejected in 78.3c are irrelevant, even backward. First, difference in the *natures* of sensible things cannot explain why we have the different senses: the senses don't apprehend those natures at all. Further, we have the *organs* of sight for the sake of seeing, not vice versa. Finally, it even seems true in some cases that the differing sensory *media* are for the sake of the capacities. Perhaps part of the reason why we have soft skin, for instance, rather than the armor plating of an armadillo or the thick hide of an elephant, is to enhance our sense of touch.

After rejecting these alternatives, 78.3c advances its own functional analysis of how the senses should be distinguished:

We should, then, derive an account of the number and distinction of the external senses on the basis of what pertains to the senses properly and per se. The senses, however, are passive capacities, naturally suited to be impressed upon by an external sensible quality. Therefore the external cause of this impressing is what the senses perceive per se, and the sensory powers are distinguished in terms of how that cause differs.

Why is air transparent?

Aquinas believes that air lets light pass through for the sake of our visual capacities. Here he is surely the one who gets the explanatory order backward. Our visual faculties have been shaped by evolution so as to take advantage of the air's transparency. We have eyes because the air is transparent, not vice versa. In making this claim, we suppose that the earth's environment existed long before animals did, and we suppose that current species have adapted to the environment, not vice versa.

One might suppose that Aquinas's contrary view stems at least in part from a commitment to the Biblical account of creation. But Aquinas explicitly rejects a literal reading of the first chapter of Genesis. The six days should not be read as revealing anything about the temporal order of creation; instead, the account is useful for "teaching uneducated people about the creation of the world" (II *SENT* 12.1.2c; see Kretzmann 1999, pp. 190–93). Even so, no matter how much time elapsed between the creation of the planet and the creation of animals, Aquinas still insists that the earth's environment was created for the sake of future living creatures and adapted to them in advance.

Rather than focusing on organs, media, or sensible natures, we should look at "what pertains to the senses properly and per se." But what will that be? Aquinas has in mind his earlier account: "one must derive one's account of a capacity from the act toward which it is directed" (77.3c). Accordingly, he here immediately describes the act associated with the external senses: they are "naturally suited to be impressed upon by an external sensible quality." Notice that the senses do not themselves perform an action, but rather are acted on. As Aquinas says, the external senses "are passive capacities"; consequently, their act (their actualization) consists in passively receiving an impression from without.³ This is the act for which the senses are "naturally suited," which is to say that this is their function, their reason for existing. Since this is what the senses are for, we can be sure that this is what pertains to them "properly and per se." Other functions – that the nose supports eyeglasses, the ear displays earrings – are improper and accidental.

The analysis does not end with an identification of the act that is the capacity's function. Acts must in turn be analyzed in terms of their objects. In terms of 77.3c, "differing accounts of an act are given according to how the account of its object differs." Accordingly, the above passage concludes that "the external cause of this impressing is what the senses perceive per

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se, and the sensory powers are distinguished in terms of how that cause differs.” The object of the external senses is the external agent responsible for making the impression. Again, this fits neatly with the doctrine of 77.3c, where Aquinas remarked that passive capacities have for their object that which is the “source and moving cause” of their acts: “so color, inasmuch as it moves sight, is the source of seeing.” Here, after Aquinas remarks that this external cause is “what the senses perceive per se,” he concludes that the sensory powers are distinguished in terms of how these objects, these external causes, differ. In this way, Aquinas’s functional analysis shifts attention toward *sensibilia*, the external objects of sensation. This is the topic of §6.3.

Aquinas turns to the internal senses in 78.4c. Here again he appeals to functional, teleological considerations, but now in a rather different way: “Because nature does not fail in necessary things, there must be as many actions on the part of the sensory soul as are adequate for the life of a complete animal.”

Here the principle is that nature supplies as much as is needed; if certain organisms require x , y , z in order to live, then nature will supply x , y , z . (Elsewhere Aquinas is more cautious: “Things that are done naturally are for the most part done rightly. Nature does not fail, except for a few cases” (*SCG* III.85.2602).) Nature will make possible the requisite actions, which means that nature will supply the capacities for carrying out these actions. With that established, Aquinas devotes the rest of the article to working out just which actions are necessary for animals. From a list of necessary actions, he can immediately infer a list of necessary capacities.

It is easy to see how one could mount an evolutionary defense of the principle that “nature does not fail in necessary things.” Animals that fail at necessary actions will not (very often) reproduce. Deficient genes will not be passed on, and deficient animals will tend to be rare. “Except for a few cases,” then, animals will have all of the capacities they need to have. But Aquinas is implicitly relying on a further teleological premise, one that is far more difficult to defend. This premise was stated explicitly back in Q75. There, in arguing for the immortality of the rational soul, he makes the following argument:

... [E]verything that has an intellect naturally desires to exist forever. But a natural desire cannot be pointless [*inane*]. Therefore every intellectual substance is imperishable. (75.6c)

The crucial middle premise prohibits superfluity. Just as nature does not omit necessary components, so it does not include pointless extras. (Analogously: when you take apart a bicycle and put it back together, it is a bad sign if you have pieces left over.) Aquinas seems to think of these principles as two sides of the same coin. He often puts into the voice of an objector the dual premise that “nature neither fails in necessary things, nor

oversupplies with superfluous things" (*QDP* 3.7 obj.1).⁴ But we should resist treating these claims as corollaries, or even as equally plausible. Although it *is* plausible to contend that nature does not fail in necessary things, it is not plausible to hold that nature does nothing pointless. There are many features of human beings that serve no purpose but we retain because they do no harm – that is, not enough harm to keep us from passing on our genes. Aristotle had proposed eye color as just such a case (*Gen. An.* V 1). And surely the desire to live forever is another example. There is a purpose in our wanting to live until old age (i.e., up to the point at which we are no longer capable of reproducing). But our desire to live forever is pointless from an evolutionary point of view. It would in fact be better, in terms of what would be genetically advantageous, if we each experienced a growing desire, as we become less sexually productive, to sacrifice our lives for the sake of younger generations. The desire to live forever seems at best superfluous, perhaps counterproductive.

This prohibition on superfluity might also be described as a principle of parsimony: entities should not be multiplied without necessity. But whereas we tend to treat such a principle as merely a methodological guide, Aquinas would give it the status of a necessary truth. Nature simply does not multiply entities beyond necessity; theories that suppose otherwise are not just inelegant or unmotivated, but necessarily false. Aquinas is not generally associated with any such principle of parsimony, and so it is surprising to find that this principle plays a key role in the Treatise – not just in 75.6, but throughout Q78. He needs the principle in Q78 because he wants to establish not only that the capacities he lists do in fact exist, but that these capacities are the only ones there are. Thus he begins 78.4c with the claim that "there must be as many . . . as are adequate" (*tot . . . quot*). The implication is not that there must be at least as many, but that there must be just as many and no more. This implication is evident in 78.4 obj.2, where the major premise states that "no internal apprehensive power needs to be posited for something for which a proper external sense suffices." If an external sense suffices, then anything more would be unnecessary, hence superfluous, hence inconsistent with the ways of nature.

Aquinas is committed to this no-superfluity principle, and so to the principle of parsimony, because he thinks that nature is the work of a governing intelligence:

Every inclination on the part of nature requires some cognition that selects the end, inclines toward the end, and provides the means by which that end is reached. This cannot occur without cognition. And for this reason the philosophers say that the work of nature is a work of intelligence (III *SENT* 33.2.5c).⁵

This governing intelligence is of course God. In the 12ae, nature is "one of God's instruments for producing movement" (6.1 ad 3). In his *Physics* commentary (II.14.268), Aquinas defines nature as the *ratio artis divinae indita rebus* – "the idea of the divine craft, imparted to things, by which

The razor

William Ockham (ca. 1285–1347) is justly famous for his extravagant use of the principle of parsimony: entities should not be multiplied beyond necessity. Inspired by this principle, Ockham reshaped much of the medieval philosophical landscape. Certainly, Ockham did not invent his so-called razor. The principle is too fundamental to be plausibly credited to any particular historical figure. (Analogously: who first advanced the proposition that *the goal of inquiry is truth?*) But fundamental as the principle of parsimony seems, it is not obvious how it might be defended. Why is it better to advance simpler theories? Are they more likely to be true? Ockham never offers a clear answer to these questions. Moreover, he explicitly rejects the claim that God does nothing that is superfluous: “there are many things that God does with more that he could do with fewer” (*Ordinatio* 14.2, III 432; see Adams 1987, pp. 156–61).

The idea that nature does nothing unnecessary or superfluous runs into difficulties from another quarter. What is not necessary need not be superfluous: it seems that some capacities might be neither necessary for our ongoing lives nor entirely superfluous. Richard Sorabji has spoken in this connection of “luxury organs” (1980, p. 157). Aquinas, in his *De sensu* commentary (12.140–57 [13.185–86]), confronts this question by asking whether our ability to smell perfume (and other odors not connected to food) has any advantage: he reasons that since such an ability scarcely helps intellect investigate the natures of things, there *must* be some further function served, and so he endorses Aristotle’s view (444a14–18) that such smells are good for one’s health.

those things are moved to their determinate end.” These remarks reveal the extent to which Aquinas’s functional analysis of the senses rests on a full-blown cosmic teleology. (See §7.1 for further discussion.) The ultimate explanation for why we have five senses, and not four or six, is that God designed us this way so that we could pursue a certain end.

It is of course not surprising to find Aquinas’s functional analysis resting on these sorts of theological assumptions. In the pre-Darwinian era, such assumptions seem virtually inevitable. (Richard Dawkins, the leading modern spokesman for the theory of evolution, has written that atheism became a tenable intellectual position only in 1859 (Dawkins 1986, p. 5).) Moreover, our sensory capacities have always seemed to be the best argument for the existence of some intelligent creator. William Paley wrote at the start of the nineteenth century,

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Were there no example in the world of contrivance except that of the *eye*, it would be alone sufficient to support the conclusion which we draw from it, as to the necessity of an intelligent Creator. Its coats and humors . . . ; the provision in its muscular tendons for turning its pupil to the object . . . ; the further provision for its defense, for its constant lubricity and moisture . . . ; these provisions compose altogether an apparatus, a system of parts, a preparation of means, so manifest in their design, so exquisite in their contrivance, so successful in their issue, so precious, and so infinitely beneficial in their use, as, in my opinion, to bear down all doubt that can be raised upon the subject (*Natural Theology*, p. 32).

Paley would bear down all doubt through some rather overbearing language. The eye is not, of course, “*infinitely* beneficial”; it has a number of quite well-defined benefits, and it is precisely by reflecting on these benefits that we can begin to see how the eye might have slowly developed over millions of years. But it seems persuasive to appeal to the slow-moving processes of evolution only now that we have established a clearly articulated and well-supported theory of evolution. In the absence of such a theory, the intelligent creator hypothesis surely must look like the best available explanation.

Even so, most of Aquinas’s functional analysis could stand without any such theological assumptions. Q78 needs to invoke an intelligent creator only in support of the teleological principle of parsimony; if this principle were denied, Aquinas could no longer claim to have derived a list of *all* the soul’s sensory capacities. But he could continue to ascribe functions to the various senses, and thus preserve his analysis of how the sensory capacities are distinguished. To continue to speak of function and purpose in the absence of design would require some account of how these terms are being used, but there is no reason to suppose such an account unavailable.

6.3. Sensibilia

The real business of 78.3 is to work out how the five external senses can be distinguished in terms of the different ways that they are affected by their external sense objects. The doctrine of 77.3, that capacities are distinguished by their acts and objects, implicitly shapes the argument of 78.3c. But Aquinas cannot simply appeal to this acts-and-objects doctrine as if it settles all questions about how the senses are to be defined and distinguished. That doctrine points in the proper direction, but leaves unsettled a number of complications with regard to how we should specify what the appropriate actions and objects of the various senses are.

6.3.1. A first complication. The argument does not place its entire weight on differences in the object of perception; instead, it focuses on both the objects and the acts, looking both at what kinds of things make an impression on the senses, and how that impression is made. Although the distinction between touch and taste turns out to be problematic (see ad 3–4), Aquinas thinks that the other senses can be distinguished by care-

fully working out the various ways in which they receive an impression from without. Central to his argument is a contrast between *natural* and *spiritual* impressions. I do not wish to pursue the details of this distinction at length,⁶ but it is worth noting the form of the account Aquinas is offering. The essential difference between sight and hearing, for example, lies neither in experiential differences (what it is like to see, versus what it is like to hear) nor solely in the objects themselves (color versus sound). Instead, the difference consists in the different mechanisms through which the different senses operate. Sound, for example, involves a merely spiritual impression on the organ, but a natural impression on the medium, inasmuch as a vibrating object passes those vibrations into the air. By this criterion, a person could be said to see through her fingertips if and only if her fingertips were receiving information in the way the eyes do – through the appropriate kind of impression made by color on the medium and then on the organ of sensation itself. On Aquinas’s criterion it would not matter whether she *experienced* the color in the appropriate way. This seems plausible: we would not deny that bees have sight just because they fail to experience color in anything like the way that we do. Nor, on the other hand, would it be sufficient on Aquinas’s view that she somehow was able to obtain information about color through her fingertips. This would not count as seeing, again plausibly enough: we would not say that a wine expert tastes the wine when smelling it, even if the smell conveys considerable information about the taste.⁷ Hence Aquinas complicates his account by including not only the object of perception but also the character of the act itself.

6.3.2. A second complication. Even once we complicate the story in this way, it remains unclear how we are to individuate the different sensory modalities. The first objection to 78.3 illustrates the difficulties of an overly mechanical application of the acts-and-objects doctrine:

The senses cognize accidents. But there are many kinds of accidents. Therefore, since capacities are distinguished by their objects, it seems that the senses are multiplied according to how many kinds of accidents there are.

The conclusion must be resisted, of course, because it would lead us to postulate indefinitely many sensory capacities. Aquinas replies by limiting the objects of the external senses to a certain kind of accidents: qualities that are capable of affecting the senses. The list of such qualities is familiar: color, sound, smell, taste, temperature, and so on.⁸ These are the so-called proper sense objects. Aquinas holds that these are the only qualities that can make an immediate impression on the senses: “the proper sensibles make an impression on the senses primarily and per se, since these are the qualities that produce alterations” (78.3 ad 2). Only these qualities can bring about alteration, where *alteration* is the technical term for qualitative change (as opposed to growth or to change in location). Aquinas takes this general claim about qualitative change to have specific implications for sensation. The objects of sensation, the *sensibilia* for which we are searching,

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are those things that can in their own right bring about (the appropriate) alterations in the senses. This is, he believes, an obvious conceptual point. As he remarks in the *De anima* commentary, in a passage that amounts to a rough draft for 78.3c, “an object is sensible insofar as it is capable of making an impression on a sense” (III.1.271–72).⁹ The primary objects of the external senses, the things that concern the senses *primarily*, *properly*, and *per se*, are things that are capable in their own right of making such an impression. These objects will be neither trees nor birds, nor even shapes or sizes, but instead colors, sounds, and so on.

It is easy to see why trees and birds do not count as the objects of the external senses. What makes an impression on the eye is color; we see a bird (if indeed we should speak at all of seeing a bird; see §9.2) only in virtue of seeing color. The same holds true for many accidental qualities as well. The qualities of being musical or grammatical (examples from 77.3c) do not, in their own right, bring about any physical alterations. These qualities may be manifested through sensible qualities, but they are not themselves sense objects, except by accident – for example, when we see a flash of yellow that just happens to be a bird.

Aquinas also needs to argue that the so-called common sensibles – size, number, shape, motion, rest – are not the things that make an impression on the external senses, at least not primarily, and therefore not the proper objects of those senses. Following Aristotle’s lead (*De an.* II 6), we standardly think of these common sensibles as the objects of more than one sense, whereas each of the proper sensibles, in contrast, belongs to a single sense. For Aquinas it remains true and important to characterize the difference in these terms. But this way of putting the distinction makes it easy to confuse the explanatory order that Aquinas sees here. The proper sensibles are not classified together because each corresponds to one of the five senses. Rather, Aquinas begins with the claim that there is something primary about these sense objects, and on that basis he makes a five-fold distinction in our sensory powers. Similarly, the common sensibles do not belong together because each is the object of multiple senses. Rather, it is because there is something secondary about these sense objects that they are not used to distinguish the senses from one another. The classic Aristotelian distinction between proper and common sense objects can therefore be misleading if it suggests that the *explanandum* (why are there five external senses?) is the *explanans* – as if the proper sensibles are special because they correspond to the way the senses are divided up.¹⁰

What makes the proper sensibles special? What makes them primary? As we have seen, these objects are special because these are the qualities that “make an impression on the senses primarily and per se” (78.3 ad 2). Moreover, the external senses have been designed by nature precisely so as to be reliable instruments for detecting the presence of such qualities:

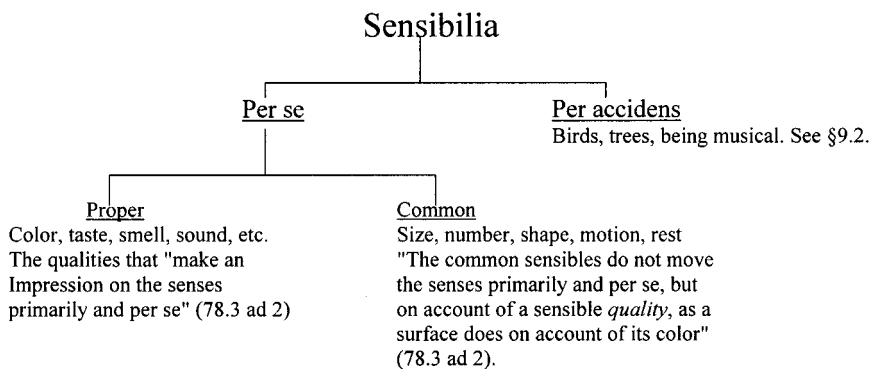
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... [A]mong things active on the senses, the *proper* objects of sense are those kinds for which a sensory power is naturally suited. As a result, the senses are distinguished in terms of the differences among these sense objects (*InDA* II.13.140–44).

Common sensibles, in contrast, occupy a problematic middle ground between proper sensibles and things such as birds, trees, and being musical, which Aquinas will describe as sensible per accidens (§9.2). Common sensibles might be described as sensible *quantities*, inasmuch as each can be “reduced to quantity” (78.3 ad 2).¹¹ Quantity is sensible per se, but it is not primarily sensible in the way that sensible qualities are. It *is* sensible per se, because differences in quantity produce different impressions on the senses: a large white surface makes a different impression than does a small white surface (78.3 ad 2). Therefore, quantity meets Aquinas’s criterion for being sensible per se: “all things that are sensed through their making an impression on the sense are sensed per se and not per accidens: for to sense is to receive something from the sensible” (*InDA* III.1.168–61; see II.13.127–31). The flash of yellow you saw out of the corner of your eye might have been the same regardless of whether you saw a real bird or an artfully contrived mechanical bird. Real or mechanical, it makes no difference to the impression. But size and so on do make a difference. If the bird had been larger, or a different shape, the impression would have been different. If the bird had been stationary, you wouldn’t have noticed it at all.

Still, these sensible quantities are not the primary objects of sensation:

Quantity is the proximate subject of an alterative quality, as a surface is the subject of a color. And so the common sensibles do not move the senses primarily and per se, but on account of a sensible quality, as a surface does on account of its color (78.3 ad 2).



The surface of an object does not itself make an impression on the senses. It does so only in virtue of being white, or sweet, or perfumed, or vibrating rapidly, or else hot, dry, heavy, and so on. Aquinas holds that *all* alteration is produced by such qualities (and thus they are here simply given the label "alterative quality"). A quantity can impact the senses only by having one or more such qualities.

6.3.3. A third complication. It is a familiar idea, in both ancient and modern philosophy, that sensible qualities such as color, sound, and heat are reducible to quantities – to various kinds of objects in motion. This looks like a devastating difficulty for Aquinas's position. His claim that quantities make an impression on the senses only in virtue of qualities suggests that qualities are irreducible. If some qualities can themselves be further analyzed back into quantities, then it looks as if the so-called common sense objects will now be the primary sense objects. The immediate effect, for Aquinas, would be that he would no longer have any way of distinguishing the five senses. Sight, hearing, and touch would all turn out to have the same object, motion, and so they could not be treated as separate senses.

The problem seems obvious to us, in light of the familiar distinction between primary and secondary qualities. But Aquinas should have been just as able to see the difficulty. He was, first, familiar with Democritus's notorious eliminative account of all sensible qualities. ("By convention color, by convention sweet, by convention bitter, in reality atoms and void."¹²). One finds little concern, in the medieval period, over Democritus's eliminativism. The worry was not that colors and flavors might not exist at all. Even Democritus's atomism would seem implausible and speculative until the seventeenth century. Still, Aquinas should at least have had cause for concern in the case of *sound*. He was well aware that sound is a product of the air's being put into local motion: the *De anima* commentary makes a detailed comparison between the waves produced in water by the impact of a stone, and the motion produced in air when transmitting a sound (II.16.169–94). Moreover, earlier philosophers often suggested that sound simply is a kind of motion. In Plato one finds the idea that hearing is the vibration of a blow that passes through the ears (*Timaeus* 67ac). Aristotle remarks that "sound is a certain motion of air" and that the air has been "walled up" inside the ears "in order for it accurately to sense all the varieties of *motion*" (*De anima* II 8, 420b11, 420a8–11). Boethius, whose views on this topic were influential in the Latin West, writes that "sound is defined as a percussion of air that remains intact up to the point of hearing," and that "every sound consists in a pulsation [*pulsus*], and every pulsation comes from motion" (*De institutione musica* I.3, II.21). None of these authors takes up the issue at length, and neither do they explicitly argue that sound can be reduced to a kind of motion. But it is natural to suppose that this is their meaning.

If the sensible quality of sound can be reduced to a kind of motion, or even if sound is perceived in virtue of local motion, then it looks as if we

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should treat motion as the primary sensible. That would put his account in disarray: either he would have to abandon the Aristotelian framework I have described, or he would be forced to reach the absurd conclusion that hearing does not qualify as a distinct sense. (A modern echo of this result can be heard in George Berkeley's *Three Dialogues* (I, 145–46), where Philonous presses the absurdity that “real sounds may possibly be *seen* or *felt*, but never *heard*.”)

Aquinas might have tried to evade the difficulty in various ways, corresponding to the variety of ways in which modern philosophers have tried to handle the problems posed by the so-called secondary qualities. But most such strategies would not have been acceptable to Aquinas. He would not, first, have identified the primary sensibles (color, sound, etc.) with the qualitative features of visual experiences (as in sense-data accounts). He insists, for reasons we will examine in §6.3.4, that the objects of sensation must be identified with external objects. Nor would Aquinas treat the sensible qualities as dispositions for producing certain kinds of experiences in us.¹³ As we will see in §6.4, Aquinas resists appealing to inner conscious experience. The position Aquinas instead embraces is that the primary sensibles are basic and objective features of the external world, irreducible to quantitative properties (the common sensibles) or to anything else. The irreducibility of sensible qualities is most evident in the case of touch. Hot, cold, wet, and dry just are the basic elements of the physical world. If other qualities, such as color, are reducible, they certainly are not reducible to the category of quantity. This is true even for sound. Despite its close relationship to motion, Aquinas repeatedly describes sound not as identical to motion, but as something caused by motion. In his commentaries he even rewrites Aristotle, at least twice, so that where Aristotle seems to identify sound and motion, Aquinas has sound occurring as the result of motion.¹⁴

It is hard not to be sympathetic with early modern philosophers who argued for the elimination of all such mysterious qualities.¹⁵ When one sees how heavily Aquinas's account of sensation rests on the existence of such irreducible qualities, it looks as if there is good reason for abandoning the account. But his account of sensation could perfectly well survive these modern (or Democritean) criticisms by embracing some form of modern physicalism: the view that the objects of sensation are the various physical phenomena that in fact produce our sensations. Color, on this view, can be described in terms of the physical properties of an object's surface; heat in terms of molecular motion; sound in terms of the compression of air. Aquinas could embrace an account of this sort by agreeing that all of the primary sensibles are in fact quantities, but still insist that only certain kinds of quantities are in fact primary sensibles. Color is a certain kind of quantity – roughly, the reflective properties of a surface¹⁶ – and it is this quantity that makes an impression, primarily and per se, on the senses. This captures the spirit, if not the letter, of Aquinas's theory of sensation. Not the letter, because it gives up on the

principle that quality is a category of being fundamentally different from that of quantity. But the physicalist view captures the spirit of Aquinas's account, because it allows him to maintain the central premise of his account: that the senses, by definition, are capacities given to us by nature for the reliable detection of certain segments of the external world. The sensible features of the world are specified in terms of their ability to make an impression on our senses; our senses are distinguished according to the differences among those sensible features and the differences among the kind of impressions they make. Whether these features turn out to be irreducibly qualitative or quantitative can be viewed as an empirical, non-essential issue.

6.3.4. A fourth complication. I mentioned earlier that Aquinas would not accept an account on which the primary sensibles are internal features of our experiences. He is always quite clear, in 78.3 and elsewhere, that the objects of sensation are external objects. This is a natural assumption to make when one's paradigmatic objects of sensation are trees and birds. Where else would one find trees and birds, if not in the external world? But when, as for Aquinas, the objects of sensation are colors and sounds, it becomes much less obvious, on reflection, that such objects belong outside of us. It has become easier to have these worries across the board since the seventeenth century, but we have seen that Aquinas had cause for concern in the case of sound. Moreover, Aquinas might well have been pushed in this direction by the two philosophers who had the most influence on him, Aristotle and Avicenna. Aristotle, as recent commentators have noted, displays at least some ambivalence on the status of sensible qualities.¹⁷ This line of thought becomes fully explicit in Avicenna, who distinguishes between a distant object of sensation, in the external material thing, and an immediate object of sensation, within the one sensing:

The thing that is sensed most certainly and immediately is that through which the one sensing is informed by the form of the thing sensed. Therefore the one sensing is in a certain way sensing himself, not the body that is sensed. For he is the one that is informed by the form that is the immediate thing sensed, whereas the external thing is informed by the form that is the distant thing sensed. Therefore he senses himself, not the snow, and he senses himself, not the raven – assuming we wish to speak of the more immediate sensation [*sensum*] in which there is no medium (*De anima* II.2, p. 129).

The consequence Avicenna foresees and embraces is that perception, on this account, becomes self-perception. Since the object of sensation is the form of the percipient himself, it seems correct to say that “in a certain way” it is something about oneself that is being sensed. As this passage suggests, Avicenna wants to leave room for saying that we sense external objects as well, indirectly. But it is clear that on this view the primary sensibles are internal objects.

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Why doesn't Aquinas follow the lead of these distinguished and influential predecessors? There is an easy answer to this question, but it leads to a harder question. The easy answer is that, by definition, Aquinas conceives of sense objects as external. Because the senses are passive capacities, their objects must be the things that move them: "An object is related to the act of a passive capacity as its source and moving cause: so color, inasmuch as it moves sight, is the source of seeing" (77.3c). The sensible, therefore, will by definition be something that acts on the senses: "an object is sensible insofar as it is capable of making an impression on a sense" (*InDA* III.1.271–72).

Now the hard question. Given that we define the sensible as that which is "capable of making an [appropriate] impression on a sense," how do we decide whether the sensible is the original source of the impression (the tomato itself, e.g.) or some more immediate cause (the light entering the eye, e.g., or the retinal image)? If we opt for one of the latter, then we begin to sound much like Avicenna, whose primary sensible is "that through which the one sensing is informed by the form of the thing" (as above). Such an object meets Aquinas's criterion for being a sense object: it is simply the most immediate sense object, the one that makes a *direct* impression on the sense organ. This is the limiting case of an *external* object, the last in a series of external objects that make their way from the ultimate source of the impression to the sense organ. Evidently, this is not how Aquinas conceives of the objects of sensation. But why not?

It is easy to see how our ordinary thinking about causality should push us in Aquinas's direction, toward treating the ultimate source as the sensible object. When we receive a letter in the mail, we describe it as being from the author, not from the mailman. When the shower runs out of hot water, we think of the fault as lying with the water heater, not with the absence of hot water in the pipes. When the house plant shrivels and dies, we blame ourselves for forgetting to water it. It would be too much to say that, in every case, we are looking for the ultimate cause. (Who could say why I ultimately forgot to water the plant? A slothful disposition? Latent hostility toward my wife?) But it is an implicit feature of our ordinary causal reasoning that we are less interested in immediate causes than in those causes that are, for us, somehow the most salient. And given this implicit principle, it is natural to suppose that Aquinas locates sensible qualities in the external world because those are the causes that are for us the most salient.

The foregoing merely gestures in the direction of a satisfying account of "causal salience."¹⁸ But this general line of thought seems so natural that it raises the question of why anyone would deny that the objects of perception are in the external world. There have been, historically, two prominent motivations for insisting that the objects of sensation are immediate. First is the suspicion that the objects of sensation – particularly Aquinas's primary sensibles, the so-called secondary qualities – simply do not exist

in external objects. We considered this line of thought in §6.3.3. Second is the desire to safeguard the reliability of the senses. We can see this desire at work near the start of the passage from Avicenna, where the inner object is not only most immediate but also most certain. This same motivation might be at work in Aristotle, given the way he stresses the infallibility of the senses with regard to their proper objects (e.g., *De an.* III 3, 428a11–12, 428b19). Norman Kretzmann (1992) has attributed this view even to Aquinas. Accurate perception of the proper sensibles is guaranteed, Kretzmann argues, by a nonrealist account of sensible qualities: “If anything looks *red*, however, it *is* red to the senses; looking red *is* all there is to being red as an object of sensation” (pp. 171–72).

It is clear, however, that this is not Aquinas’s view. In the face of Aristotle’s remark that “the actuality of the sensible and the actuality of the sense capacity are in the sense capacity” (*De anima* III 2, 426a10–11), Aquinas distinguishes two ways in which a thing is actually sensible: sensible inasmuch as it has the capacity to affect the senses, and sensible inasmuch as it is actually doing so right now.

Everything that can be sensed is said to be actual in two ways. It is actual in one way when it is actually sensed – i.e., when its species is in the sense – and a sound is actual in this way in virtue of being in the sense of hearing. It is actual in a second way in virtue of being of the proper kind so as to be able to be sensed, as it is in its subject. Other qualities are actually sensible in this way inasmuch as they are in bodies that can be sensed: color, for instance, as it is in a colored body; smell and flavor, as they are in a body with smell or flavor (*InDA* II.16.62–71).

Aquinas takes Aristotle’s talk of a sensible quality’s actually existing in the sensory capacity to hold true only insofar as “its form [*species*] is in the sense.” The quality itself is actual “as it is in its subject.” Generally, “color, smell, flavor, and tangible qualities have a permanent and fixed existence in their subject” (*InDA* II.16.20–22).¹⁹

What of Aquinas’s avowals of sensory infallibility? If sensory qualities are objective properties of external objects, then it seems obvious that we can and do go wrong, even about proper sensibles such as color and smell. Aquinas handles such cases by carefully qualifying the scope of the infallibility. The senses are infallible, first, only if the sensory organ is in the proper condition: “the senses are deficient with respect to a true judgment concerning their proper sense objects only on rare occasions, because of some damage to the organ” (*InDA* III.6.67–70). Further, infallibility is assured only if there is no impediment to the organ’s reception of the sensible quality: “as when the taste of those who are feverish judges sweet things to be bitter because of their tongue’s being full of the wrong humors” (85.6c).²⁰ Jointly, these two restrictive conditions block all of the obvious counterexamples to the alleged infallibility of the senses. If lighting conditions are nonstandard, or if a pane of colored glass stands between perceiver and object, then the organ has been impeded from properly

Where are sounds?

After describing how sensible qualities actually exist in their object, Aquinas notes that there is one problematic case:

This is not the case for sound, however. For in a body making a sound that sound is only potential; the sound is made actual in the medium, which is moved by the striking of the body making the sound (*InDA* II.16.71–74; see 77.4c).

Aquinas's position on sound accords with our pretheoretical intuitions; we do tend to think of sound existing in the air, not in the object, whereas we think of color as existing in objects. (Odors are a mixed case.) It is not clear to me that this way of thinking about sound could survive critical scrutiny, given a modern understanding of the mechanisms at work. Our view about sound seems to stem primarily from the fact that we see colors only when we look directly at them, whereas we hear sounds around the corner, down the hall, and so on. This makes it seem as if sound fills the air, hence exists in the air, whereas color seems located in a single place. But this hardly gives us a reason for saying that the one exists in the object, the other in the air. Moreover, if you pay attention to where you hear sounds as being located, they sound as if they exist at the object that is their source. They don't sound as if they exist in the air. Does this mean that our sense of hearing deceives us about the true location of sounds? I discuss these issues in Pasnau (1999c).

receiving the sensible quality. If the perceiver is blind, or even colorblind, then the organ is defective.

Generously interpreted, these two conditions nearly trivialize the claim of infallibility. If there is no fault in how the information comes into the sense, and if there is no fault in the sense's processing of that information, then of course the sense will not be mistaken. No room is left for mistakes. Such near triviality is not a bad thing, because the thesis of sensory infallibility is true only when made virtually trivial. Moreover, the thesis is still not entirely trivial. It amounts to the claim that *in ideal circumstances, functioning as they should, the senses do not make mistakes about sensible qualities*. Viewed in this light, the infallibility thesis is another manifestation of Aquinas's teleological thinking about cognition. The external senses have been designed by nature precisely so as to be reliable instruments for detecting the presence of certain qualities. Of course, things can go wrong. But, by design, things do not go wrong unless the circumstances are exceptional.²¹

6.4. Common sense and consciousness

One of the more obscure aspects of Aristotle's theory of perception – “dark and difficult” (Maudlin 1986, p. 65) – is his account of the common sense. Aristotle's readers have understood this mysterious faculty in various ways, treated it as central or peripheral to the theory of perception, analyzed it into several faculties, denied that it is a separate faculty at all. Because Aquinas is, at least to some extent, following Aristotle in these matters, many plausible readings of Aristotle can also seem to be plausible readings of Aquinas.²² But although it is tempting to attribute all kinds of robust functions to the common sense, this is a hazardous business, because Aquinas has very little to say about this particular capacity. Outside of the discussions that occur in commenting on the *De anima* and the *De sensu*, his most extensive remarks come in 78.4 ad 1–2. As we'll see, these remarks leave considerable room for interpretation.

Let us begin with what is certain, with what Aquinas himself tells us in 78.4. First he explains the sense in which the common sense is in fact *common*:

An internal sense is called common not by way of predication, as a genus is common [to many particulars], but as the common root and source [*radix et principium*] of the external senses (ad 1).

In other words, the common sense is not common in the way that a universal is common, being predicated of (or even belonging to) each particular thing. Rather, the common sense is some one thing that is “the root and source” of the external senses. Perhaps an apt analogy would be a common ancestor. But the word ‘root’ suggests not merely that the external senses originated in this common sense, but that they are somehow sustained by the common sense. So an apter analogy, perhaps, would be a common water main, shared by all the houses on a street. (Themistius, Peter of Spain, and Albert the Great all used roughly this analogy; see the notes to *InDA* III.3.64 (ed. Leonine).) Aristotle is quite clear in treating the common sense as a sustaining influence of this kind: “when this [common sense] is incapacitated then all the other sense organs must become incapable of sensing” (*De somno* 455b11). Aquinas does not indicate, however, whether he would accept this last claim.

There is another way in which the common sense is common: not just as the common root and source, but also as the common terminus of the impressions received by the external senses. A passage from the *De anima* commentary neatly combines these two roles:

The power for sensing is spread into the organs of the five senses from one common root: from this root, the capacity for sensing goes into all of the organs; at this root, all of the impressions of the individual organs terminate (III.3.169–74).

Aquinas speaks of the common sense as that “to which all sensory apprehensions are conveyed, as to their common terminus” (78.4 ad 2), and as

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“a certain capacity at which all sensory impressions terminate” (*InDA* II.13.94–96). Regardless of what functions are in the end attributed to the common sense, it is clear that all sensory information is fed through this capacity. Notice, moreover, that it is not just a mediating way-station, but the *terminus*, the endpoint of sensation. Once information makes its way to the common sense, the process of sensation is complete. The next step is phantasia or memory, via the cogitative/estimative power. (See *InDMR* 2.119–94 [318–322], and §§9.1 and 9.2.)

The physiological picture here is rather obscure. Albert the Great described the common sense as distributing “animal spirit” to the organs of the proper senses (*Summa de homine* 35.2), but Aquinas (wisely enough) is silent on this point. It is not even clear where Aquinas locates the common sense. In the *De veritate*, he says that all the internal senses, including common sense, have their organs in the brain (18.8c). In this he is following Avicenna, who described the common sense as located “in the first chamber of the brain” (*De anima* I.5; p. 87). This, surely, was the up-to-date scientific view. In his Aristotelian commentaries, however, Aquinas tries to reach some sort of accommodation with Aristotle, who had held that the common sense was located in the heart (see, e.g., *De somno* 2, 456a5–6; *De part. an.* III 4, 666a13–19). Rather than ignore or gently excuse Aristotle for his outdated science, Aquinas seems to propose a kind of compromise:

The sensory principle is in the heart first. . . . But from the heart, sensory power is distributed to the brain, and from there it goes to the organs of the three senses: sight, hearing, and smell (*InDSS* 4.277–84 [5.76]; see also *InDA* III.3.195–204).

Clearly, Aquinas wants to give the common sense a centralized location, where it can be both the starting point and end point of sensation. But he doesn’t say enough about this, and what he does say isn’t always consistent.

What does the common sense actually do? Aquinas *is* fairly consistent in the answer he gives to this question, but there is considerable room for interpretation. First, what common sense does not do. It does not receive any special sense object of its own; it does not, in particular, have common sensibles as its special object. The external senses perceive common sensibles, and do so per se (see, e.g., 78.3 ad 2; *InDA* II.13.125–59). These so-called common sensibles, then, do not serve to distinguish the common sense in the way that the various proper sensibles served to distinguish the five external senses (see §§6.3.1 and 6.3.2). Rather than have its own special objects, the common sense simply takes in the various impressions of the external senses, which leads Aquinas to conclude that “it is impossible for the common sense to have a proper object that is not the object of a proper sense” (*InDA* II.13.96–98).²³

Given that the common sense has no special object, Aquinas must make a case for its existence by identifying some function that it performs. In

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fact, he identifies two ways in which the common sense operates on the impressions it receives from the external senses:

With respect to these impressions of the proper senses from their objects, the common sense has several proper operations that the proper senses cannot have. Namely, (1) it perceives those impressions of the senses, and (2) it discerns between sensibles of different senses. It is, for example, through the common sense that we perceive that we see and discern between white and sweet (ibid., 98–105).

I refer to these as the *second-order* and the *comparative* operations, respectively. What Aquinas must be able to show, with regard to each of these operations, is that (1) they are necessary for animal life and (2) they are operations no other capacity of the soul can perform.

1. The operation must be necessary for animal life, because only then can Aquinas invoke his teleological premise that “nature does not fail in necessary things” (78.4c; see §6.2). Notice that Aquinas might establish that *human beings* engage in the relevant operation, simply appealing to our own experience of doing so; this would not show, however, that all animals engage in this operation. (Thus it is not enough for Aquinas to remark at *InDSS* 18.21–22 [19.282], “supposing that an animal does sense different sensibles at the same time, since *we* clearly experience this. . . .”) To show that this operation is one that every sensory soul is capable of, he needs to be able to invoke his teleological machinery.

2. The operation must also be one that no other capacity of the soul could perform. If some other capacity could perform it, then there would be no need for common sense, and so postulating it would run afoul of Aquinas’s other teleological premise, that nothing in nature is superfluous. Aquinas has this point in mind when he raises the objection that the external senses suffice for both the second-order and the comparative operations. The objection concludes, “Therefore there was no necessity in positing for this purpose the internal capacity that is called the common sense” (78.4 obj. 2). If there is no necessity for the common sense, then of course it should not be posited.

Aquinas replies to this objection by establishing that the external senses could perform neither operation. First, not the comparative:

A proper sense makes judgments about its proper sensible, discerning it from others that fall under the same sense – discerning white from black or green, for example. But neither sight nor taste can discern white from sweet, because that which discerns between two things must cognize both. Consequently, this discerning judgment must pertain to the common sense, to which all sensory apprehensions are conveyed, as to their common terminus (78.4 ad 2).

A capacity can discern between two things only if it apprehends both. But no external sense apprehends the proper sensibles that characterize another sense. (This result is guaranteed by the way the external senses are individuated (see §6.3.2).) Therefore, no external sense can carry out the comparative operation. The same is true for second-order perception:

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The common sense also perceives sensory intentions, for example when someone sees that he is seeing. For this cannot take place through a proper sense, which has cognition only of the form of the sensible thing that makes an impression on it. In this impression seeing is completed, and as a result of this impression another impression follows in the common sense, which perceives the seeing (78.4 ad 2).

The crucial point is that it is one thing to sense a sensible quality, another to sense one's sensing of that sensible quality. (On the distinction here between *intentions* and *forms*, see §9.1.) These are two different perceptual contents, and there is no reason for a capacity capable of the former to be capable also of the latter. Moreover, Aquinas's earlier account of the external senses –

The senses are passive capacities, naturally suited to be impressed upon by an external sensible quality. Therefore the external cause of this impressing is what the senses perceive per se . . . (78.3c) –

seems to entail that the second-order operation is not something those senses could do. The senses are rather crudely targeted at the external world; given their passive nature, there would seem to be little room for them to possess some further, second-order operation.

If the external senses cannot perform either of these operations, perhaps some other capacity can – in particular, intellect. We have now looked at everything Aquinas says about the common sense in the Treatise, and so evidently he doesn't address that issue here. But the commentaries help at this point. Aristotle had asked, "Since we discern white and sweet, . . . by what do we sense that they differ? It must be by sense – for they are *sensibles*" (*De an.* III 2, 426b12–15). Aquinas elaborates:

It belongs to sense to have cognition of sensibles inasmuch as they are sensible. For we have cognition of the difference between white and sweet not only with respect to the what-it-is of each thing, which pertains to intellect, but also with respect to the different impressions on sense. This can be brought about only through a sense (*InDA* III.3.46–51).

Again, Aquinas defines the sensory in terms of what makes an impression on the senses, the sensible qualities that are the proper objects of sensation. Because the comparative operation in question here involves comparing these qualities "inasmuch as they are sensible," the operation must be sensory, not intellectual.²⁴

Much the same line of thought holds for the second-order operation. Aquinas supposes that a second-order perception of one's own perceiving must involve the perception of the same sensible qualities found in the first-order perception. The power through which one sees that one is seeing, for example, must itself be able to see color. How else could one see seeing, if not by seeing color? Admittedly, there are a number of complications and doubtful philosophical assumptions here, some of which Aquinas takes up in working his way through Aristotle's difficult text (*De*

Proclus on reflection

Aquinas describes the common sense as passive in just the way the external senses are (*InDA* III.3.205–28). This is not surprising, given that the common sense operates simply by receiving impressions from the external senses. The common sense does not reflect on itself. Only the mind is capable of reflecting on itself in the strict sense. (There is no need for a separate “common intellect” to grasp our own thoughts (§11.2).) The reason the senses cannot reflect on themselves is that they are material:

A proper sense senses in virtue of an impression on the material organ from an external sensible quality. But it is not possible for something material to make an impression on itself; instead, one thing receives an impression from another. As a result, the act of a proper sense is perceived through the common sense (87.3 ad 3).

As it stands, this explanation is not very illuminating. Why, we should ask, can something immaterial “make an impression on itself”? And why exactly can something material not do so?

Aquinas does not himself ever answer these questions in any very effective way (see, e.g., 14.2 ad 1, III *SENT* 23.1.2 ad 3). But his brief remarks should be understood to rest on an elegant argument by the fifth-century Neoplatonist Proclus. (At II *SENT* 19.1.1, Aquinas appeals to a different, less effective argument by Avicenna (*De anima* V.2, pp. 93–98).) In his commentary on the *Liber de causis* (7.190), Aquinas quotes in full Proclus’s defense of the thesis that “everything that can turn toward itself is nonbodily”:

No body is naturally suited to turn toward itself. For if that which turns toward something is in contact with that toward which it turns, then it is clear that all the parts of the body that turns toward itself will be in contact with all [the rest of its parts]. This is not possible for anything that has parts, because of the separation of the parts, each of which lies in a different place (*Elements of Theology* XV).

There are three premises. First, turning toward a thing (becoming aware of it) requires being somehow in contact with it. Second, for a cognitive capacity to be aware of itself, the whole capacity must be in contact with the whole capacity. (This seems right: if some part of the whole could be left out of this loop, then it would not be part of the capacity at all.) Third, no material thing can be wholly in contact with itself in this way. Conclusion: no material cognitive capacity can apprehend its own activity. Only simple (that is, immaterial) cognitive capacities can do so. Thus the senses need a common sense.

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an. III 2, 425b12–426b8). But what seems clear is that this second-order operation is genuinely perceptual in its content, rather than conceptual. We do form higher-order conceptual judgments about our sensory capacities and operations, when we classify them as members of a certain kind, but such judgments are the province of intellect, as we'll see in detail in Chapter 11. The second-order states at issue here, in contrast, are perceptual states: "the capacity that sees that something is seeing is not outside the genus of visual capacity" (*InDA* III.2.116–17). Regrettably, Aquinas is not forthcoming with examples of this operation. One kind of case that seems to fit his model is perceptual attention: concentrating on a noise, for instance, seems to be a higher-level state, and also to be a way of *hearing* the noise. But however these details be filled in, the conclusion is clear. Second-order sensation must be sensory, not intellectual. And if it is not one of the external senses, we must postulate some additional sensory power.²⁵

Yet is it right to think of the common sense as an *additional* sensory power? We have just seen Aquinas describe it as a visual capacity, and so clearly it must also be auditory, olfactory, and so on. This suggests that the common sense might just be some common aspect of all the sensory capacities, their common sensory core. This, in turn, would imply that the operation of the common sense just is the operation of one or more of the special senses, and vice versa. Aristotle is often read in this way, and there are places where Aquinas might seem to be in agreement.²⁶ Overall, though, it is clear that this is not Aquinas's view. First, we have seen how 78.4 ad 1 rejects the idea that the common sense might be a kind of universal, shared among each of the external senses. It is instead the "root and source" of the external senses. This in itself leaves considerable room for interpretation. But the unambiguous conclusion of 78.4 is that the common sense is a genuinely distinct capacity, not merely something shared by all five. This conclusion is confirmed later on in the Treatise, when Aquinas says that because a material thing cannot make an impression on itself, the activity of one sense must be sensed by a second, the common sense (87.3 ad 3). (See **Proclus on reflection**.)²⁷

But what *is* the relationship between the external senses and common sense? Aquinas describes the common sense as the terminus of sensation (e.g., 78.4 ad 2), and this may suggest that the external senses are somehow incomplete: as if perhaps genuine sensation occurs only at the higher level. This was in fact Avicenna's view of the common sense: "the center of all the senses, that from which the branches are derived and to which the senses return; *this is what truly senses*" (*De anima* IV.1; p. 5). Descartes would later take this view (*Optics* 4, AT VI 109), and some find it in Aristotle (see, e.g., Block 1960, pp. 98–99). But it seems clear that this is not Aquinas's view. Here is the end of 78.4 ad 2:

A proper sense has cognition only of the form of the sensible thing that makes an impression on it. In this impression seeing is completed, and as a result of this

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impression another impression follows in the common sense, which perceives the seeing.²⁸

Two points need to be stressed. First, sensation just is the impression of a sensible quality on an external sense. A complete act of seeing consists in nothing more than a sensible quality's impression on an external sense (*in qua immutatione perficitur visio*). Second, the common sense's operation occurs *after* sensation occurs, and as a result of sensation. Second-order perception follows the first-order sensory operation. So although the common sense is somehow the root of the sensory powers, Aquinas would deny Avicenna's claim that the common sense is what truly senses. Common sense does not seem to enter into the picture until after sensation takes place.

But what exactly is the nature of this sensation that occurs at the level of the external senses? Does it count as what *we* would call sensation? Does it count as genuine conscious perception? One might want to agree with Avicenna that the mere impression of sensible qualities on the eye or ear cannot *truly* be sensation.²⁹ There are some plausible reasons for suggesting that the common sense is where consciousness happens. First and most obvious, second-order perception seems to be a way of talking about consciousness. What is consciousness, if not an awareness of our own mental states? Second, the comparative operation also seems to bear a close relationship to consciousness. One prominent recent line of thought about consciousness argues that it is what enables us to synchronize and regulate our various perceptual systems, with the result that we act as a unified agent.³⁰ Is this not precisely the comparative operation?

This is a standard modern reading of Aristotle, and at least a common reading of Aquinas.³¹ But it seems very unlikely to be what Aquinas had in mind, for several reasons. First, there is every reason to think that Aquinas regards the operations of the external senses as themselves conscious. Recall that, at the end of 78.4 ad 2, Aquinas distinguishes the operation of the external senses from the operation of the common sense. First the former occurs, then the latter follows. If consciousness is to be associated with the common sense, we would have to suppose that this first operation is one that is not itself conscious, but only becomes introspectively available thanks to the subsequent operation of common sense.³² But such a consequence seems incredible. Could Aquinas really believe that the operations of hearing, seeing, and so on, strictly speaking, are nonconscious? How can we call something *seeing*, in a human being, if it is not a conscious operation?

The proposal may seem less incredible, and perhaps even unavoidable, when the external senses are identified with the eyes, ears, and so on. How could the eye, a merely passive recipient of colors, engage in something as sophisticated as conscious perception? Surely the eye is just the first stage of a more involved process. Indeed it is. But Aquinas's account of the further mechanisms involved simply reinforces the view that consciousness

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must come before the operations of common sense. Commenting on Aristotle's remark that "from the two eyes there comes about some one thing, and there is one operation belonging to them" (*De sensu* 7, 448b27–28), Aquinas writes that this is true "inasmuch as the vision of each eye runs through certain nerves to an inner visual organ near the brain" (*InDSS* 18.66–69 [19.284]). This visual organ is not the common sense, which is located within the brain, but neither is it the eye alone. The whole visual power performs the "one operation" that sight engages in. But what could this operation be, if not conscious perception? The alternative is to attribute a radical incompleteness to the external senses.³³

Nothing in Aquinas's writing supports the idea that the common sense accounts for conscious perception. This idea seems to be an instance of how philosophical mistakes breed interpretive mistakes. The reason Aquinas's common sense seems to be the locus of consciousness is that commentators have assumed consciousness must occur in some centralized location – what Daniel Dennett has mockingly referred to as the Cartesian theater. According to Dennett, "the idea of a special center in the brain is the most tenacious bad idea bedeviling our attempts to think about con-

Conscientia

It is a doubly hazardous undertaking to ascribe an account of consciousness to Aquinas, given that he never explicitly takes up this topic, and that he doesn't even have a word for consciousness. The closest word, for Aquinas, is *conscientia*, which can in certain contexts mean self-knowledge. Even then, however, the kind of knowledge in question is knowledge of one's own actions, not knowledge of one's inner mental states (see 79.13; *QDV* 17.1c). It is easy to imagine how, from there, the word might have been extended to something like our modern meaning of consciousness, but that is not a usage that Aquinas would have found natural.

Premodern philosophers do not generally talk about consciousness per se. Did they not see that the problem of consciousness is the really hard problem in the philosophy of mind? (Cf. Chalmers 1996.) More likely, they never clearly saw that there might be a problem about the mind other than the problem of consciousness. When premodern philosophers try to explain the various forms of cognition (sensory and intellectual), they take for granted that they are trying to explain what we call consciousness. There was no need for a special word to describe the problem, because consciousness was the whole problem. What is distinctive of recent philosophy of mind, then, is not the stress on consciousness, but the idea that some progress might be made without explaining consciousness.

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sciousness" (1991, p. 108). Since we have the inescapable sense that our conscious experiences are coming together all in one place, we suppose that there must actually be some one place where this happens.

Aquinas does not have a theory of consciousness. But neither does he make the false assumption that there is some one place where consciousness happens. Indeed, one of the consistent motifs of Aquinas's work is his effort to account for the mind's operations without postulating this kind of command center. The soul's different capacities play different roles, and what we take to be unified functions, such as consciousness, are actually distributed over several capacities, working in tandem. The common sense is not the magic place where consciousness happens, because consciousness happens all over the mind. We will see in the chapters to come how Aquinas employs this decentralized pattern of explanation throughout his thinking about how the soul functions.

A question remains. Why are the twin operations of the common sense necessary for animal life? I raised that question near the start of this section, describing it as one of two results that Aquinas must establish (the other being that no other capacity is capable of the operation). If the common sense does not directly enter into sensation, and if it is not essential for consciousness, then why must all complete animals possess this power? One might well question whether the operations I have described are ones that many animals need or even use. Charles Kahn has remarked that "although it is essential for animals to discriminate between different colours or between different flavours, only men – and really, only philosophers – are interested in discriminating colours from flavours" (1966, pp. 55–56). The same kind of point might seem true for second-order perception. Who but a philosopher needs to view our sensations as sensations rather than as the sounds and colors of the outside world? If the common sense does no more than this, it should not be counted among the four internal senses.

These remarks fail to recognize that any cognitive entity, however simple, must have the ability to coordinate its various cognitive modalities. Imagine what it would be like if the various sensory powers did not have some means for their various impressions to be synchronized. Imagine if, when the ears heard something, an animal were unable to match that auditory impression with the visual impression of the surroundings. Imagine if animals could not discriminate between seeing and not seeing: if they were unable to recognize when they are not seeing what they are looking for, or when their seeing is unproductive because of too little light. Clearly, there must be some capacity within an animal that allows the various sensory impressions to interact. This is why Aquinas postulates a common sense.

Psychologists now refer to this as the *binding problem*. But this modern idea has ancient precedents. Aristotle believed that without some place in which sensations come together, there might as well be two different people

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doing the sensing (*De an.* III 2, 426b17–23). As Aquinas explains, “if we were to sense sweet and white by distinct capacities, it would be as if distinct human beings were sensing: one sensing sweet, the other white” (*InDA* III.3.76–78). William James would later use a similar argument: tell each person in a group one word of a sentence. Collectively, the group knows the sentence. But “nowhere will there be consciousness of the whole sentence” (in Flanagan 1992, p. 159).

The binding problem is not a problem of consciousness, but a problem of access. How can a cognitive system access the data collected by its various subsystems? How can an animal with five different sensory capacities function as a unified whole? This becomes the problem of consciousness only on the assumption that there is one magic place in the mind, a Cartesian theater, where all of our experiences come together.³⁴ Aquinas is not driven to postulate a faculty of consciousness, but he is driven to postulate a faculty where information comes together. Recent work in cognitive studies casts doubt on the idea that there is a single place where the mind’s various streams of information come together (see Hardcastle 1996). It is not likely that there is a common sense, when that is conceived as a spatially unified terminus for all sensory cognition. But in more abstract functional terms there must be something like a common sense: all animals must have some capacity for assembling sensory information into a unified whole. If so, then Aquinas’s theory of the common sense is largely defensible.

Desire and freedom

Everything that has a form has an appetite, but appetites come in different kinds. Natural appetites are fixed by nature, and determine their possessor to the pursuit of a certain end. An end is pursued only if it exerts some causal influence on the pursuer, the influence of final causality, and this requires some sort of cognitive grasp of the end. Hence natural appetites imply an intelligent creator (§7.1). Voluntary agents can determine their own appetites, by gathering information about the world around them. Lower animals meet this standard, and in a sense they can even be considered free agents (§7.2). But genuine voluntariness, and genuine freedom of choice, requires rationality. Indeed, human beings have free choice precisely because we have the capacity to deliberate rationally about the judgments we make (§7.3). Aquinas's account of freedom implies that one can still choose freely, even if one's choice is causally determined. We are in control of our choices so long as our judgments are subject to prior judgments, and our choices subject to prior choices (§7.4).

7.1. Natural appetite

Of the human soul's various capacities, only two – intellect and will – distinguish us as human. Aquinas quotes with approval John Damascene's remark that we are made in the image of God in virtue of being “intellectual, free in our decisions, and capable on our own” (1a2ae pr). The latter two of these characteristics depend on the capacity of will. Although much of the Treatise is devoted to intellect, and although Aquinas returns later in *ST* (1a2ae 6–17) to a discussion of the will, he could hardly have surveyed human nature without at least touching on our so-called rational appetite.

To say that the will is the rational appetite is to say that it is an appetitive power guided by reason. But what is an appetitive power? Most generally, “an appetite is nothing other than a certain inclination toward something on the part of what has the appetite” (1a2ae 8.1c; see 87.4c). Accordingly, the function of an appetitive power just is to produce such appetites or inclinations: “the operation of an appetitive power is completed when the agent is inclined toward its object” (81.1c; see 1a2ae 6.4c). In our case these inclinations come in the form of desires, and indeed the Latin *appetitus* can often be plausibly translated as *desire*. So the will operates, producing desires, and these desires in turn lead to action on the part of our mind or body. “The act of will is a certain inclination toward some-

thing. . . . An inclination is a disposition of the mover in virtue of which the agent produces movement" (*QDV* 22.12c). Aquinas often insists that it is the whole human being which moves, thinks, perceives, and so forth. But it is useful nevertheless to discriminate between different internal powers (see §5.1). So we can say that the will produces inclination, and that those inclinations in turn lead some further "agent" to "produce movement." This further agent is our internal motive power, the locomotive power that appears in Aristotle's canonical list of the soul's five capacities (see 78.1sc). When the Treatise provides its preliminary differentiation of the soul's various capacities, the appetitive and the locomotive get placed together as those capacities that are required "inasmuch as the soul is inclined and tends toward an external thing" (78.1c). So the appetitive powers supply the inclination, whereas the locomotive capacity enables the animal to pursue: "every animal that moves does so in order to pursue something desired and intended" (78.1c).

The appetitive powers are, in some ways, the counterparts to the cognitive powers. Just as animals have the ability to receive and process information from the external world, through the senses, so animals have the ability to desire and enjoy features of the environment. Moreover, just as human beings have a special cognitive capacity, the intellect, so we have a special appetitive capacity, the will. (Is the will a myth? See §8.1.) Yet in some respects this parallel is misleading. Whereas cognitive powers are found only in higher-order living beings (animals and above), everything in nature has appetite. As Aquinas puts it at the start of his treatment of the human appetitive capacities,

Every form has some inclination that follows from it. Fire, for example, is inclined by its form toward a higher place, and toward generating that which is like it. . . . Following from this natural form is natural inclination, which is called natural appetite (80.1c).

Since everything that exists has a form, everything that exists has an appetite. The human appetitive capacities are therefore a special case of a more general phenomenon.¹

One might suppose that this ascription of appetite to all of nature is some kind of crude anthropomorphism, the dead-end project of explaining nature in terms of concepts that have a place only in human psychology. In fact, Aquinas's project is precisely the opposite. He is not trying to bring psychology to bear on the rest of nature, but rather to use his general theory of the natural order to understand human beings. Rather than attribute to human beings an obscure volitional power, and leave it at that, Aquinas wants to account for the will in terms of concepts that play a familiar role elsewhere. In the case of the will, as in so much else, it is important to Aquinas that he situate his theory within a broader account of the workings of nature. Human beings are a part of the natural order, and work much like other members of that order. Although different in some respects, we are neither more nor less mysterious than the rest of creation.

Loquendo naturaliter

Philosophers today compete to see who can offer the most naturalistic explanation of a given phenomenon. But what is a naturalistic explanation? According to Barry Stroud (1996), naturalism is “little more than a slogan on a banner raised to attract the admiration of those who agree that no supernatural agents are at work in the world” (p. 54). On this account, the history of philosophy can be viewed as a more or less steady march in the direction of naturalism, and the development of modern science can be viewed as philosophy’s most notable success story.

Edward Grant (1996) has argued that modern science owes much to the practice among medieval natural philosophers of speaking naturally: investigating not the miraculous but the ordinary course of nature (p. 195). Thomas Aquinas is not generally regarded as a leader in early science, but his theological methodology should be seen as a crucial step in that direction. Aquinas’s naturalism is in fact one of the most striking features of his work on human nature. It is his conviction that human beings can be understood using the same principles that apply to the rest of nature. When it comes to intellect this conviction does eventually run out (see §§10.2 and 10.3), but Aquinas remains convinced that the human will can be understood without making any special appeal to supernatural phenomena.

Even more striking, as we will see in §§7.3 and 7.4, Aquinas believes that human *freedom* can be understood in naturalistic terms. In contrast to recent philosophers who frankly concede that their accounts of free will leave us with a mystery (Nagel 1986, pp. 120–24, 136–37; van Inwagen 1993, pp. 197–98), Aquinas believes that one can have a thoroughly naturalistic account of the will and still have room left over for human freedom.

To see that this is in fact the direction in which Aquinas argues – from the natural world in general to the specific case of human beings – we can look at 81.2c, where the question is whether sensory appetite should be split into a concupiscible and an irascible component (see §8.2). There almost the entire weight of the argument rests on an analogy to the natural appetites of substances like fire, which according to Aquinas also display these two species of appetite. After examining the case of natural appetite, Aquinas draws the immediate conclusion that “there are necessarily two appetitive capacities in the sensory part.” Far from being cautious about extending the notion of *appetite* to noncognitive things, Aquinas takes those cases as paradigmatic and works his way up from there.

7.1. NATURAL APPETITE

Sensory appetite is importantly different from natural appetite, and rational appetite is different in still further ways. Discussion of these differences can wait, however, until we get some more precise sense of what appetite or inclination is, and why Aquinas thinks that appetites are found throughout nature. Since Aquinas builds his account of the higher appetites from the more mundane natural appetites, we too should begin with the basic cases.

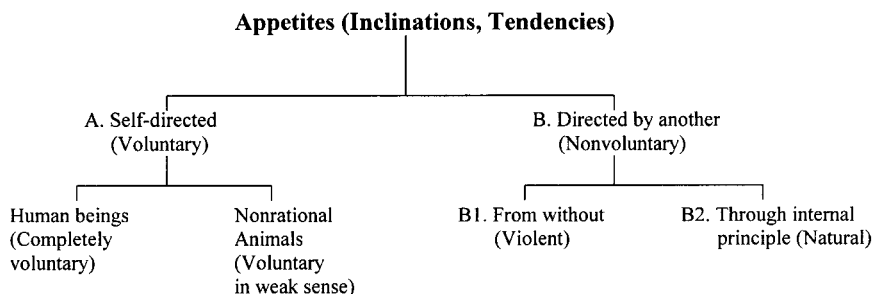
The claim that all things have appetites is asserted without argument in the *Treatise*. It is in fact an indirect consequence of Aquinas's teleological view that every agent – that is, anything that does anything – acts for an end, a claim that Aquinas argues for later in *ST*:

An agent moves only from the intention for an end. For if an agent were not determined to some effect, it would no more do one thing than another. So for it to produce a determinate effect, it is necessary that it be determined to something certain, which has the character of an end (1a2ae 1.2c; see *SCG* III.2.1875).

The point is that all things act in determinate ways. Fire spreads, ice makes things cold, the mind thinks (*SCG* III.2.1869). Objects do not produce random effects, but are inclined in certain specific directions. An agent without an end would not just act randomly, but could not act at all. Like Buridan's ass, an agent unmotivated by any end would be stuck between alternatives, incapable of moving toward one or another.²

So understood, the notion of acting for an end is not very controversial; to accept it, one need accept only that all things have some particular natural inclination regulating their actions. Aquinas stresses that an agent may act for an end without having any cognitive grasp of that end. But of course a thing's inclination must be regulated somehow: there must be some reason why fire tends to spread, why the mind thinks. Aquinas breaks down the possibilities by drawing two distinctions (paraphrasing *QDV* 22.1c):

- (A) Some things direct themselves toward an end. Human beings, for example, choose their own goals, and so we are said to direct ourselves toward our ends. For a thing to direct itself toward an end it must have some cognition of that toward which it is aiming.
- (B) Other things are directed toward their end by something else. But there are two possibilities here:
 - (1) Some things are directed toward their end "only by being forced and moved by that which directs them." Such agents have no internal inclination toward their end; they are moved entirely from without. A saw, for example, is directed by a carpenter. The end here is the particular project the carpenter has in mind. The saw has this end entirely in virtue of the carpenter.
 - (2) Other things, though directed from without, are directed toward their end through an internal principle that has been supplied to



them. Fire tends to spread, being “inclined by its form toward . . . generating that which is like it” (80.1c).³

The A branch is of course important: this is the special way in which animals have appetites. As we will see in §7.2, the AB distinction marks the difference between the *voluntary* and the *nonvoluntary*. For now, however, my interest is in the second distinction, between the two kinds of non-voluntary agents. Aquinas says that B1-type agents are moved *violently*, whereas B2-type agents are moved *naturally*. The inspiration here is Aristotle: what is done violently, or by force, according to the *Nicomachean Ethics*, “has an external source” (III 1, 1110a1). But this isn’t quite enough, because natural (B2) agents also have an external source. A fire needs to be lit, and sustained by fuel. So Aquinas needs to take seriously Aristotle’s full claim:

What is forced has an external source of the sort in which that which acts or is acted on contributes nothing (ibid.; cf. 1110b17).

Aquinas explains this as follows:

Not every [action] whose source is external is forced [*violentum*], but only that which comes from an external source in such a way that the [agent’s] internal appetite does not concur in the same [action] (*InNE* III.1.93–96 [387]).

It may be, then, that the saw always produces boxes, because that is all the carpenter makes. But the saw has no particular inclination toward producing boxes (as opposed, say, to bookshelves). Notice that Aquinas does not exactly follow Aristotle’s account. Aristotle, indeed, would apparently not be able to count the saw’s operation as forced. For it is obviously not the case that the saw “contributes nothing” to the box-making. Indeed, on reflection, it is not clear that Aristotle’s account, as it stands, is at all adequate. His own examples are of being carried away by a strong wind or by bandits. But consider a case where I am taken hostage and forcibly dragged along as a human shield. Here it is clearly not the case

that I contribute nothing to the action – I contribute the shield. What can be said is that my desires do not concur in the action. As the Treatise puts it, “we call that violent which is *contrary* to the inclination of a thing” (82.1c). Aquinas seems to have improved on Aristotle in this regard.

Aquinas believes, as we have seen, that everything acts for an end. It does not straightaway follow that he believes everything has some appetite. What needs to be asserted, in addition, is that everything acts *naturally* for an end. The world might be such that this is not the case. We might imagine that some things have no natural ends of their own to pursue, and that they act only when forced to act. More radically, we might imagine

Providence

Does God exercise any ongoing causal influence on the world? Enlightenment philosophers famously limited God’s causal role to the initial designing of the works and winding of the spring. From there, the universe was said to run like clockwork. Nicolas Malebranche (1638–1715) went to the opposite extreme. On his occasionalist doctrine of causality, God alone is responsible for every causal relationship: nothing happens that is not immediately brought about by God.

Aquinas held a moderate view. God is the first cause of all things, but is in general a remote cause. Created beings exercise their own causality. Still, God continues to exercise his causal influence in *sustaining* the universe: whereas a clock can outlive its maker, the universe could not endure for an instant without God. (For the lively medieval debate over occasionalism, see Perler and Rudolph 2000.)

Even if God is merely a remote cause, that still raises questions about how human beings can be free to pursue their own ends. Can’t a remote cause determine the course of events just as surely as a direct cause? The Bible sends out mixed signals on this subject. On one side is Ecclesiasticus 15, 14: “God established human beings from the beginning, and left them in the hands of their own counsel” (see 83.1sc).

On the other side is Wisdom 8, 1: “[Divine wisdom] stretches from end to end, and arranges all things commodiously” (see 22.2sc).

Aquinas again wants to take a compromise position, on which all things are subject to divine providence, down to the slightest detail (22.2c), but yet human beings continue to have freedom. Whether he can have it both ways depends at least in part, of course, on what he means by ‘freedom’ (see §7.4).

7. DESIRE AND FREEDOM

that everything in nature works this way, and that God, or some cosmic puppeteer, moves objects when he sees fit. This is not the role Aquinas gives to God. Aquinas's God is not a control freak; he *delegates* causal authority, giving his creatures the capacity to pursue their appropriate end. In the case of natural agents, those ends are specified by God, but nevertheless God gives his creatures their own internal means of achieving those ends.⁴

Everything that comes from God takes on some nature that directs it toward its ultimate end. So natural appetite must be found in all creatures that have an end (III *SENT* 27.1.2c).

Acting naturally toward some end requires having an inclination toward that end. Such inclinations are what Aquinas calls natural appetites.

All things have natural appetites, even things that paradigmatically fall within the A or B₁ category. The metal of a saw has a natural appetite for holding its edge. Human beings have a natural appetite for happiness (see §7.3). But to see these two examples of natural appetite next to one another should remind us of how little has yet been said about what an appetite is. An appetite, we have seen, is an inclination. And an inclination, we might say, is a tendency toward a certain sort of action, or a disposition to do a certain thing (or be affected in a certain way) in certain circumstances. What more can be said? One might attempt a statistical analysis. How often must an agent perform an action, to count as having a tendency in that direction? Most of the time? All of the time in appropriate circumstances? Rather than pursue these questions, I propose a different line of attack: that we look at where appetites come from.

An appetite is by definition something internal to the agent. It is an abstraction, in just the way that dishonesty or intelligence are abstractions that we might attribute to a human being. Still, it is reasonable to ask where appetites come from. One sort of answer we can successfully give in many cases is a material answer. Fire spreads because it consists of certain gases that . . . and so on. The saw was cut out of metal that tends to hold its edge because . . . and so on. Answers of that form should work even for sensory appetites, once we understand the brain (see §2.3). Yet Aquinas wants to give a further kind of explanation of where appetites come from. The function of an appetite is to bring about actions for the sake of an end. For Aquinas, then, a complete account of appetite will include a discussion of final causes. It is not enough to analyze fire in terms of its chemical components; we must further consider the ends toward which fire aims, in virtue of its appetites.

The very legitimacy of final causes has often been questioned. Spinoza makes a well-known and characteristic attack on the common prejudice "that all natural things act, as men do, on account of an end" (*Ethics* I appendix). According to Spinoza, the doctrine of final causes is fundamentally confused:

This doctrine concerning the end turns Nature completely upside down. For what is really a cause, it considers as an effect, and conversely. What is by nature prior, it makes posterior.

Spinoza frames his attack vividly, but it is hardly original. Aquinas himself raised the same worry as the very first objection in 1a2ae 1.1:

A cause is naturally prior. But an end has the character of something ultimate, as the name itself suggests. Therefore an end does not have the character of a cause.

Aquinas's reply is brief:

An end, even if it comes last in execution, still comes first in the agent's plan (*intentione*). And in this way it has the character of a cause.

One might take Aquinas's reply to be essentially concessive: of course the end itself cannot play a causal role: it has not even come into existence yet. The end plays a role only insofar as some agent (God, a human being) is thinking about that end. The end itself, then, is not, strictly speaking, a cause. It is the thought concerning that end which is the cause.

This would be an quick way around Spinoza's objection – yet it is not what Aquinas says. His point is not the uncontroversial one that the *thought* of an end can play a causal role in an action. He means to assert that the end itself, despite coming into existence as a result of the action, nevertheless plays the role of a cause: "the end is a principle in things done by human beings" (1a2ae 1.1sc). The above reply is not at all concessive.

Spinoza supposes, plausibly enough, that what does not exist can have no causal power, and that later results can have no causal role in earlier events. Aquinas must maintain that both of these claims are false. That which does not exist can have a causal influence, when conceived of in the agent's mind. That which comes later can play a causal role in earlier events, when it is an object of thought.

The end does not actually exist except through the operation of the agent; still, the end is said to be the *cause* of what exerts efficient causality, because the efficient cause operates only through a conception (*intentionem*) of the end (*De principiis* 4.17–19 [356]).

This is not the place to adjudicate the old debate over final causes. But I believe Aquinas's position has merit. Whereas Spinoza thinks of all causality along the lines of efficient causality, Aquinas wants to leave room for causality of a special sort. The intellect moves the will not in the way that "that which pushes moves that which is pushed," but by providing the will with its object: "something good apprehended by intellect," which "moves the will as an end" (82.4c; see §7.4). Is this sort of causality any more mysterious than the mind's other operations? We speak of fearing the future, of desiring the future, of being motivated by the future. Why should the last of these be a conceptual mistake? One obviously can *think* about things that do not exist. Is it any harder, then, to countenance being motivated by things that do not exist? The alternative would be to insist that the

future cannot motivate us, and that it is our present beliefs and desires that motivate us. But insisting that I cannot be motivated by something in the future, and that it must be my idea of the future that motivates me, seems to have as little merit as insisting that I cannot *think* about a nonexistent object, and that it must in fact be my *idea* of that object that I think about. Spinoza seems to neglect the special role of mind in final causality: the way the mind allows us to be motivated by what is not immediately at hand, and even by what does not exist.⁵

If Aquinas is right, the mind has the special capacity of giving causal salience to what lacks existence. "For something to be done for the sake of an end, some sort of cognition of the end is required" (1a2ae 6.1c). No wonder, then, that Aquinas believes all things acting naturally toward an end, hence all things with appetites, are directed by mind. "Every work of nature is the work of an intelligent substance" (SCG III.24.2050). Rational creatures choose their own end (see §7.3); natural agents follow God's will:

All natural things are inclined toward their ends through a certain natural inclination from the first mover, which is God, and consequently that toward which a thing is naturally inclined must be that which is willed or intended by God (QDV 22.1c).

This is the sort of full-blown cosmic teleology expected of Aquinas. In §6.2 I tried to show how much of Aquinas's thinking about teleology could be seen in a more attractive light, independently of any controversial argument from design (and see §In.5). Here we can see precisely where Aquinas's larger theory does and does not require the argument from design. One might still speak of agents having natural appetites without invoking a divine plan, and hence still speak of agents acting for an end. Such talk would still make sense in a universe without God, because it could be analyzed in terms of tendencies and dispositions. But Aquinas believes we can give no further explanation for such tendencies and dispositions without appealing to an intelligent cause. If the world were governed merely according to a sequence of necessary causes, with no overarching design, then

suitability and usefulness would come about by chance, and so would occur not for the most part, but in the rare case, as do other things that we say occur by chance (QDV 22.1c).

This argument from design has had few supporters in the modern era, fewer since Darwin.⁶ I do not mean to defend it.

Without the argument from design, Aquinas would lose not just his ultimate explanation for the natural world's harmony and order; he would also lose final causality across most of the natural order. As I have described Aquinas's position, final causality is possible only in virtue of a mind that grasps the end in question. Such causality is almost as counterintuitive as Spinoza complained, but it is not, on reflection, incoherent.

7.2. VOLUNTARY AGENTS

Ends exert their seemingly magical backward influence only through mind; if nature does not act according to the divine plan, then there is no genuine acting for ends, no genuine teleology in nature. Much of what counts today as teleological thinking would be merely quasi-teleology for Aquinas. The theory of evolution may suggest that giraffes have long necks for the sake of eating from high branches. Yet it is not some future end that plays a causal role here, but the past success of long-necked giraffes. That is not genuine final causality, as Aquinas construes it. Genuine final causality involves a mind's reaching forward toward some goal and, by conceiving of that goal, giving it causal efficacy. Without God's overarching design, final causality as Aquinas conceives of it would mostly disappear.

All of this tells us something about appetite. Appetite is the crucial intermediary in the causal sequence that begins with the mind's conception of an end and finishes with the completed action that achieves the end. The purpose of appetite is to achieve a certain end; the source of appetite is a conception of that end. Final causality, "the first and highest of causes" (82.3 obj. 1), plays its role through the mechanism of appetite: "the end's causality consists in other things being *desired* on its account" (SCG I.75.644). The idea of natural appetite, then, lies at the center of Aquinas's teleological conception of the world. We might construct a facsimile of natural appetite in a world without God. But Aquinas's idea would lose much of its meaning.

7.2. Voluntary agents

Natural appetites are God-given. God gives things their nature, and their nature determines them to a certain end. To be determined toward an end is to have an inclination toward an end, and this is to have a natural appetite for that end.

Natural appetite is the inclination of any given thing, of its own nature, to another thing. Thus any capacity desires, by natural appetite, that which is appropriate for it (78.1 ad 3).

Obviously, natural appetites are rather limited in their flexibility and predictable in their outcome. A creature can no more change its natural appetites than it can change its own nature. Even in our case, "the will adheres of necessity to its final end, which is happiness" (82.1c).

If all desires were natural, there would be a sharp limit on the ability of creatures to adapt their desires to their particular needs. There is, however, a more complex kind of appetite: animal or sensory appetite. Animals, in virtue of this kind of appetite, have the capacity to modify their desires in light of changing circumstances. Because animals need to engage in a variety of operations, "it was necessary that animals have in addition an animal appetite that follows apprehension, so that from the variety of things apprehended, an animal is led in various ways" (QDV 22.3 ad 2).

The key is the capacity for apprehension or cognition. Without cognition, a substance has only its innate natural form, and there is of course no hope of modifying that form, therefore no hope of changing one's innate appetites. Cognition supplies information, in the literal sense that to be cognitive is to receive the forms or species of other things. This information brings with it the capacity to have an appetitive power of wider scope, "through which an animal can have an appetite for the things that it apprehends – not just for the things toward which it is inclined by its natural form" (80.1c). The external senses, memory, and the estimative power all contribute to shaping animal appetite. Indeed, the central purpose of the various sensory capacities is to ensure that animals are motivated in the necessary ways. For "the movement and action of an animal follow apprehension" (78.4c).

The task of 80.1 is to defend the claim that "appetite is a special capacity of the soul." Given the presence of appetite throughout nature, there is reason to wonder whether appetite is even a capacity of the soul at all. As the first objection sensibly remarks, "no capacity of the soul should be assigned to what is common both to things with souls and to those without." Aquinas replies by stressing the distinctive nature of this so-called animal appetite. Just as animals have a special cognitive capacity to receive information, so they must have a special appetitive capacity to make use of that information. Because this special capacity is not a natural appetite, and because it is a distinctive feature of living things, it is sensible to ascribe the capacity to soul. "Everything that is a special feature of a living nature must be traced to a capacity of the soul" (III *SENT* 27.1.2c).

Aquinas wants to establish in 80.1 not just that animal appetite belongs to the soul, but that it is a special (distinct) capacity of the soul. In particular, he wants to stress that it is not simply an additional operation of the soul's *cognitive* powers. Given the close connection between animal appetite and the capacity for cognition, such an identification might seem plausible. Moreover, these cognitive powers do have appetites of their own: "each capacity of the soul is a certain form or nature, and [therefore] has a natural inclination for something" (80.1 ad 3). Still, Aquinas argues that animal appetite is a distinct capacity of the soul. The appetites possessed by our cognitive powers are natural appetites, and as a result they are characteristically limited in scope. Sight, for example, has an inclination for seeing. Animal appetite, in contrast, is something over and above these various natural appetites. It is animal appetite that looks out for the needs of the whole organism: at this level an animal desires a thing "not because it is appropriate to the act of this or that capacity, . . . but because it is appropriate to the animal as a whole [*simpliciter*]" (80.1 ad 3). Animal appetite is what translates sensory information about the environment into an inclination based on what is appropriate to an organism of that kind. This is something over and above the cognitive capacities.

7.2. VOLUNTARY AGENTS

Although the appetitive and cognitive capacities are distinct, they nevertheless entail each other. As we have seen, animal appetite could not exist without the senses, and rational appetite (the will) is analogously dependent on intellect (see §7.3). Moreover, all sensory creatures have sensory appetites, without exception. Sensation without appetite would be pointless, like a kite without string. But nature does nothing that is pointless (see §6.2). So the fact that animals have a special capacity for receiving information about the world shows that they must have a special capacity to make use of that information. This is how Aquinas implicitly reasons in 80.1c:

Therefore, just as forms exist in a more elevated way in cognitive things, . . . so there must be in them an inclination above natural inclination. . . . So it is necessary, then, to posit a capacity of the soul that is appetitive.

It is not that no creature *could* have sensation without animal appetite, but that such a thing would have no point. No reasonable creator would work in that way.⁷

These are the sorts of taxonomic details that the Treatise is fond of dwelling on: How many capacities are there? What are their species and genera? How are they related? But animal appetite raises theoretical issues of a more interesting sort. Positioned halfway between natural appetite and rational appetite (the human will), animal appetite puts its possessors in a murky gray area between freedom and necessity, responsibility and determinism. As we will see, Aquinas believes that animals are voluntary agents, but not fully voluntary. They take part somewhat in freedom, and are capable of making decisions, but they are not capable of making free decisions. By examining the capabilities and limitations of this animal appetite, we can better come to understand what makes human beings free and responsible agents.

One way of getting at the special role of animal appetite is to look at how it gives animals a special claim to be self-movers. All and only living things are capable of moving themselves in one way or another, but in the case of plants this self-motion amounts to little more than an innate disposition to grow in certain fixed ways. The more complicated desires of animals stem from their capacity to be moved by an internal principle that is not simply innate, but rather acquired through the senses: "the principle of motion for animals is not a form supplied by nature, but one taken in through the senses" (18.3c). Whereas plants move themselves toward a predetermined end, animals are capable of determining their own end, by taking in information from the surrounding environment. To move oneself, a thing must have a part that moves and a part that is moved. Animals have this, because their cognitive side moves their appetitive side, which in turn moves their bodies.⁸ As we will see, this does not yet give animals the sort of control over their behavior that human beings have, but it does make them self-movers of a sort well above the crude level of plants.

Why do plants have souls?

Plants have souls because they are alive and because, by definition, that which is alive must have a soul. The soul just is “the first principle of life in the things that are alive around us” (75.1c; §1.1). So much is clear, and if anything is odd in the idea of plants having souls, it is simply that we use the word ‘soul’ to translate *anima* and *psuchê* (see **Anima**, p. 27).

But why do we say that plants are alive? Even today there is no agreement on what the proper criteria for life are. Aquinas remarks that “in plants, life is obscure and hidden” (*InDA* II.7.6o). And in fact he seems to have no very good account of why plants should be said to have life. Officially, his view is that “those things are living, strictly speaking, that move themselves by some kind of motion” (18.1c). Living things, in other words, are self-movers. Plants barely count as self-movers, inasmuch as they are inclined by a determinate natural appetite, toward a determined end, both of which have been supplied by nature:

Some things move themselves not by having any regard for the form or end that they possess by nature, but only with respect to carrying out their motion. . . . Plants are like this; they move themselves, by growing and declining, through a form given to them by nature (18.3c).

So although plants do not determine their own ends, still it is the plant itself that carries out the motion: leaves grow, leaves die, and it is the tree that brings this about.

But is there really a fundamental difference here between plants and nonliving things? Fire also has inclinations in virtue of which it seems to move itself: “fire is inclined *by its form* toward a higher place, and toward generating that which is like it” (8o.1c). Aquinas handles these cases by arguing that fire is moved only when it is not in its proper place; once in its proper place (having risen to the heavens) fire comes to rest. Plants, in contrast, move as part of their natural, perfect state; plants never come to a rest, except when they die (18.1 ad 2). But now Aquinas seems to have modified his account. Plants are special not because they are self-moving (fire is, too), but because they are constantly self-moving, as part of their natural condition.

In his *De anima* Commentary, Aquinas is inspired to handle these difficulties in another way. Plants count as being alive, he argues, not just because they move themselves, but because they move themselves in opposite directions, shoots upward and roots downward. “It is clear that this principle is soul, not nature, because nature does not move in opposite directions” (*InDA* II.3.173–76; cf. *De an.* II 2,

continued

413a25–29). The basic requirement remains self-motion, but again it is supplemented by a further criterion.

Elsewhere, Aquinas implicitly brings into question even the basic requirement. In 1a2ae 6.1c, for example, he holds that things with “no grasp of their end . . . are not said to move themselves, but to be moved by others.” By this standard, plants would not count as self-movers.

This capacity to be aware of the environment, hence to grasp the possibility of acting for one end or another, gives animals a partial claim on being voluntary agents. As we saw in §7.1, voluntary agents are those that direct themselves toward an end. Aquinas’s more exact criterion is as follows:

When both (i) acting and (ii) acting for the sake of an end come from an internal principle, then the motion and act of these beings are called voluntary (1a2ae 6.1c; see *InNE* III.1.70–73 [386]).

Plants meet the first test: their action comes from an internal principle. But acting for the sake of an end requires “some sort of cognition of the end” (1a2ae 6.1c). Since animals desire things on the basis of their cognition of those things, animals count as voluntary. But they count only marginally as voluntary, because they do not “completely” grasp the things they pursue. A complete cognition of an end requires apprehending not just the thing itself that is desired, but also the thing’s character and the relationship between means and ends. Fully voluntary agents grasp all of this, and so “having apprehended the end, and after deliberating about the end and the things that are for the end, one can be moved or not moved toward the end” (1a2ae 6.2c). Animals lack this capacity: “when [an animal] apprehends an end it does not deliberate, but is at once moved toward it” (*ibid.*). In a weak sense, then, all animals act voluntarily. But because animals are incapable of deliberation they are not voluntary agents in the fullest sense.

Deliberation requires reason and the capacity to grasp universal concepts; hence only rational agents can be fully voluntary. As we will see more fully in §7.3, reason lies at the heart of Aquinas’s account of human freedom. Brute animals “have a certain likeness of reason” (*QDV* 24.2c), because they can make judgments about things on the basis of their estimative power (see §9.1). But there is no comparison or inference here, no deliberation about alternatives. As evidence of this, Aquinas notes that all animals of the same species carry out the same sorts of actions – “all swallows make nests in the same way” – and that animals are only competent in certain limited, determinate areas – “the diligence of bees extends to no work beyond honeycombs” (*QDV* 24.1c).

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This quasirationality gives animals a kind of quasifreedom, a “conditioned freedom”:

For they can act, if they judge that a thing is to be done, or they can not act, if they do not so judge. But because their judgment is determined to one thing, their appetite and action is consequently determined to one thing. . . . [T]he sheep when it sees the wolf necessarily has to fear it and flee; the dog when provoked to anger necessarily has to bark and react aggressively (*QDV* 24.2c).

These are examples of voluntary actions, inasmuch as the animals are doing the things they want to do, based on their impressions of what they ought to do. For the same reason, their choices are free – in a limited, conditional sense. Aquinas remarks that the sensory appetite of a nonrational animal “does not entirely have freedom, but participates somewhat in freedom” (*III SENT* 27.1.2c), and that in the sensory appetites there is “something of an imitation or likeness of freedom” (*QDV* 23.1c). Still, animals are missing a fundamental component of genuine freedom:

The inclination itself is not in the power of the animal that is inclined, but is determined to it from without. For an animal, at the sight of something desirable, cannot *not* want that thing, because those animals do not have control over their inclination (*QDV* 22.4c).

Nonrational animals, then, cannot help but bark when angry, or flee when scared, or behave in whatever way their nature dictates, because they cannot bring their inclinations under any sort of control.

In looking carefully at the case of nonhuman animals, Aquinas is working his way toward a genuinely explanatory account of freedom and indeterminacy, an account on which we can point to the exact respect in which various animals are and are not free. Nonrational animals are subject to a certain sort of determinism and necessity, but not to the extent that other creatures are. At least animals do the things they judge that they should do, and at least animals could and would be doing something different, if the circumstances were different. Aquinas is willing to call this a sort of conditioned freedom. It is, he says elsewhere, a freedom of motion or action (*SCG* II.48.1243).⁹ But human beings are free in a fundamentally deeper way, which he refers to as freedom of judgment or decision.

7.3. Rational choice

In discussing the freedom of human choices and actions, Aquinas gives the preponderance of his attention to the notion of free decision (*liberum arbitrium*). This is the official topic of Q83, and is at the forefront of his discussions of human freedom in most other places. The principal interest of Q83 is, once again, taxonomy. What sort of thing is free decision, and how does it relate to the soul’s other powers? In successive articles, Aquinas establishes the following conclusions:

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- a1. Free decision is a consequence of rational judgment.
- a2. Free decision is a capacity, not an act or a disposition.
- a3. Free decision is the capacity to make choices.
- a4. Free decision is the same capacity as will.

From a modern perspective there is nothing very surprising in aa2–4. Indeed, the line of argument there seems to bring the notion of *free decision* quite close to our notion of *free will*. First, free decision is a capacity (a2), much in the way that free will is a capacity. Despite the fact that ‘decision’ suggests an action, Aquinas reports that common usage dictates otherwise. Second, free decision is the capacity to make choices (a3); in fact, it is the capacity of will (a4). Although a full account of Aquinas’s action theory would need to focus on many subtleties in these articles, their general thrust can be accepted without much discussion.¹⁰

Let us take for granted, then, that free decision is the will’s capacity to make choices:

For we are said to have free decision as a result of being able to take up one thing while refusing another – this is to choose. And so it must be through choice that one gets at the nature of free decision (83.3c).

Strictly, to choose is “to have an appetite for a thing for the sake of pursuing another” (83.4c). This is one of various operations that belong to will; it is paired with the operation of willing, which is to have an appetite for an end, for its own sake. One *wills* an end, therefore, whereas one *chooses* the means. Two things come together in a choice, the cognitive component of *counsel*, and the appetitive component of *acceptance*. Through the former “one judges what should be preferred over another”; through the latter “one accepts, by having the appetite, that which is judged through counsel” (83.3c). Officially, only the acceptance constitutes the choice. But Aquinas’s view is more nuanced than this suggests. In fact, “choice is *chiefly* the act of an appetitive power” (83.3c). There is a strong cognitive component, too, which is why Aquinas can also characterize free decision as “that by which a human being *judges* freely” (83.2c). Thus the freedom in question is freedom of *decision*, which is said to be the same thing as free judgment (83.2 obj. 1, 83.3 obj. 2).

When forced into taxonomic precision, Aquinas backs off from ascribing a cognitive component to free decision. Strictly, “free decision is an appetitive capacity” (83.3c).¹¹ But although Aquinas feels obliged to plant free decision firmly on the appetitive side of the fence, the broader contours of his thinking suggest that the cognitive side is in fact doing much of the work. Indeed, “the root of all freedom is found in reason” (*QDV* 24.2c). Free decision may be an appetitive capacity, for accounting purposes, but we will see that it is reason that gets the job done.

The conclusion of 83.1c is that “human beings necessarily have free decision, from the very fact that they are rational.” Aquinas develops the role of reason in free decision by working his way through the cases discussed in §§7.1 and 7.2:

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Some things act without judgment, as a stone is moved downward – and all things lacking cognition do likewise. Other things act with judgment, but not free judgment, as do brute animals. For when a sheep sees a wolf it judges that it should flee by a natural judgment, not a free one. For it makes this judgment from a natural impulse, not from a comparison. And this is likewise true for every judgment made by brute animals (83.1c).

Nonrational animals come closer to having free decision, in that they do grasp their end, and hence can be said to make judgments about that end. Elsewhere Aquinas writes that nonrational animals “act through a decision of sorts, but not a free decision” (59.3c). Their judgment or decision is not free, Aquinas tells us here, because it comes “through a natural impulse, not through a comparison.” This matches the findings of §7.2, where we saw that other animals fall short of human freedom because of their inability to deliberate about their ends. The sheep simply flees, without considering the matter; the dog simply barks.

Human beings also make judgments: determining, for instance, that something should be fled or pursued. But there is a crucial difference:

Because this judgment occurs from a certain rational comparison, and not from a natural impulse for a particular course of action, a human being thus acts by free judgment, being capable of being drawn toward different things. For reason is open to opposites, as regards contingent things. . . . But particular courses of action are contingent things, and so in their case the judgment of reason is open to various outcomes, and is not determined to one (83.1c).

To have free judgment, or free decision, is to judge by a rational comparison (*collatio*), a comparison that opens the door to various courses of action. Although reason might at first glance suggest one line of action, matters are never so clear that there are not other possibilities. Practical deliberation does not have the inevitability of mathematics, for example. In the so-called demonstrative sciences, “the intellect is forced by the principles themselves to consent to the conclusions” (*QDV* 22.6 ad 4). In deciding how to act, in contrast, there is plenty of room for indeterminacy.

Aquinas develops the reasons for this indeterminacy at greater length in 82.2c. There he gives two reasons why the will is not necessitated in its choices. First,

there are some particular goods that have no necessary connection with happiness, because a person can achieve happiness without these. The will does not adhere to such things of necessity.

In fact, most things have no *necessary* connection with happiness. You can go to the store today, or go tomorrow, you can go right now, or go in a few minutes. Indeed, it is hard to think of anything that one must absolutely necessarily do, and do in just this way, at just this moment, on pain of forfeiting happiness. Moreover, even if there are such cases, one is unlikely to recognize them as such. So even when confronted with something one must do, ignorance will typically insure at least the *possibility* of one’s doing

Ignorantia

It is characteristic of much recent work on free will to connect human freedom with knowledge of one's circumstances and of what is best in those circumstances. Daniel Dennett (1984) analyzes freedom in terms of having real opportunities, which requires having information about one's options.

Susan Wolf (1990) puts a similar stress on one's having the right sort of information: "The responsible being is capable of recognizing that some actions, characters, and lives are better than others, of seeing which ones are better than others . . ." (p. 77). Aquinas's view looks rather different. Part of what makes human choices free, on his view, is that we *lack* full information about what we ought to do. If we were fully informed, and were certain about that information, then in some cases there would be only one choice we could rationally make. We would not be able to choose otherwise.

Of course, God is fully informed. So how can he be free? Here Aquinas appeals to the fact that God always has alternative options available: there is nothing – other than his own goodness – that God must will (19.3, *QDV* 23.4; see Epilogue). But since our options are rather more limited, we seem to be free only because of our ignorance.

This looks like a paradox. But Aquinas suggests various ways of avoiding the paradox. One is to insist that, no matter how much one knows, there are always various choices available that would equally well achieve the goal. At a certain level of detail, this is no doubt true: you can give \$10 in alms, or \$10.05. But this maneuver is ultimately unsatisfying, because there seems to be a more general respect in which certain knowledge would limit one's options: a *thoroughly* committed Christian must be charitable, not selfish. (Of course, it's Aquinas's point that human beings in this life never are that thoroughly committed to anything. The next life is a different matter: see 12ae 10.2c, and the discussion in Cross 1999a, pp. 150–51.)

A second move would be to concede that knowledge and freedom are often in tension. Although knowledge is always valuable, the same cannot be said for freedom. In fact, people often choose to give up their freedom: by marrying, for instance, or by joining the military or a religious order. Aquinas has no qualms in saying that such vows take away from one's freedom *in a certain way* (*QQ* 3.6.3c).

Finally, one might develop an account of freedom that is compatible with being unable to choose otherwise. On this view, full infor-

continued

mation would not make us less free. This is how Susan Wolf argues, and in §7.4 I suggest that this is Aquinas's view as well. Knowledge and freedom are not incompatible, then, because one can be free *in a certain way* even in a case where, given what one knows and how one feels, one cannot possibly do otherwise.

something else, by mistake. This is the second reason for the indeterminacy of choices:

Other things have a necessary connection with happiness: those through which a human being adheres to God, in whom alone true happiness consists. Still, before the necessity of such a connection is demonstrated through the certainty of the divine vision, the will does not adhere to God of necessity, nor to things belonging to God (82.2c).

Aquinas's view, of course, is that our happiness requires that we follow God. Sometimes, presumably, this will require that we do a certain thing, at a certain moment. But in this life we never recognize such cases with certainty – we don't even adhere to God himself with complete certainty. Thus all of our actions, even the most important ones, are free and undetermined.

By analyzing free decision in this way, Aquinas is proposing to explain the illusive concept of freedom in terms of the more familiar notion of deliberation. But what exactly does this deliberation consist in? Aquinas appeals to the idea of second-order judgments. Other animals, he says, “do not make judgments about their judgments; rather, they follow the judgment given to them by God.” In contrast,

A human being, judging what to do through the power of reason, can make a judgment about his decision, inasmuch as he grasps the character of the end and the means to the end and the relationship and order of one to the other. Thus he is the cause of himself not only in moving, but also in judging, and thus he has free decision, as if to say that he has free judgment in acting or not acting (*QDV* 24.1c; see *QDV* 24.2c, *SCG* II.48.1243).

Deliberation, then, requires the capacity to reflect on the choices we make, by considering what it is we are after, and how we might best get there. All of our choices leave room for doubt and second-guessing, given the limits on what we know and the variety of options. To have free decision is to be capable of such second-guessing, to be able to contemplate whether our first inclination is really right, or whether we might be better off doing things in another way. Other animals, in contrast, have no such ability. The swallow is determined to build its nest a certain way, the dog is determined to bark when provoked. Their actions are determined, “because they are unaware of the reason for their judgment” (*QDV* 24.2c).

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To be free from determinism and necessity is to be capable of inspecting the reasons behind our judgments, and to change our mind should circumstances warrant.

Aquinas describes this freedom as free decision or free judgment, or sometimes freedom of choice (*QDM* 6). As we have seen, he thinks that it is a capacity of will, strictly speaking. But we have also seen why reason is the root of freedom, and why human beings are free “from the very fact that they are rational” (83.1c). Aquinas does not often speak of free will: willing, strictly speaking, is the desire for ultimate ends, and the will’s ultimate end is necessitated: “just as the intellect adheres of necessity to first principles, so the will adheres of necessity to its final end, which is happiness” (82.1c). Hence we do not freely choose happiness: “the appetite for our final end is not one of the things we are in control of” (82.1 ad 3).¹²

Aquinas understands happiness in an Aristotelian sense, as the complete and self-sufficient good that is the ultimate end of human life (see *Nichomachean Ethics* I 7, 1097a15–b21). No argument is given for the central thesis of 82.1, that we will happiness necessarily. The thesis does not seem to be a conceptual, analytic truth: it is possible to *imagine* rational beings who don’t always will their own happiness. Rationality itself does not seem to require that we will our own happiness. Aquinas sees it as an obvious empirical fact, however, that all human beings do will precisely this; each of us is motivated by the drive for our own happiness.

Of course, there are widely different conceptions of what happiness is, which makes the necessity of 82.1 a rather trivial matter. But though fairly trivial as a generalization about human motivation, the thesis plays a key role in explaining free decision. The will adheres of necessity to happiness only insofar as it has a generalized conception of happiness. Aquinas draws on this generality in explaining how deliberation relates to free decision. Whereas other animals have a natural appetite for some determinate end,

humans have been given an appetite for their ultimate end in general, so as to have the natural appetite for being complete in goodness. But as for what this completeness consists in – virtue, knowledge, pleasure, or other such things – this is not determined to them by nature (*QDV* 22.7c).

This wide-open capacity for making choices requires a wide-open capacity for understanding happiness in the most general light. We can choose freely because we can think in general terms about what happiness might consist in. Accordingly, Aquinas often explains our capacity for free decision in terms of our capacity for understanding universals:

Only that which has intellect can act through a free judgment, insofar as it cognizes the universal nature of the good, on the basis of which it can judge that this or that is good. So wherever there is intellect there is free decision (59.3c; see 1a2ae 1.2 ad 3).

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The will is innately inclined toward one ultimate end, happiness, and on that basis makes the particular choices that seem appropriate. Aquinas takes the relationship between ultimate ends and more immediate goals to be analogous to the relationship in reasoning between principles and conclusions. It is of course the role of reason to determine that this more immediate goal stands a good chance of yielding ultimate happiness. But the option is desirable, and thus selected by will, because of the way the immediate goal has been linked to the ultimate end. This is another way of describing the process of deliberation.¹³

This link between freedom and universality explains why elsewhere Aquinas connects free decision with the mind's immateriality. Why is it that only human beings, among animals, have their inclinations under their own control? Aquinas sometimes answers that only rational animals have immaterial souls: they "do not use a corporeal organ, and so are farther from the nature of something moved, and come closer to the nature of a mover and an agent." Other animals, in contrast, "do not have control of their inclination . . . because their sensory appetitive power has a corporeal organ" (*QDV* 22.4c). This looks utterly unhelpful and mysterious, as if Aquinas's account of free decision here amounted to nothing more than a raw appeal to the soul's immateriality.¹⁴ But that is not the claim at all. The soul's immateriality matters here because immateriality is what guarantees the capacity to engage in universal cognition (see §2.2, §10.4). Aquinas offers the analogy of a builder who has a house in mind (*QDV* 23.1c; see *QDM* 6c). If the idea of the house were a sensory, material form, then the builder would have what amounts to an ingrained animal instinct to build just that house. (Think of the bees and their honeycomb.) The builder "would not remain free to make or not to make the house, or to make it one way or another." But because the builder's idea of the house is intellectual and immaterial, it is not one determinate thing or another, but abstract and hence open to various particular lines of development. It is subject to deliberation and review, hence subject to rejection as a bad idea altogether. In this way, the appeal to immateriality is merely a way of invoking the central role of reason in free decision.

We have now seen Aquinas's most developed account of free decision. He does give other kinds of arguments for its existence. There is, in particular, this brief argument:

Human beings have free decision. Otherwise counsels, exhortations, precepts, prohibitions, rewards, and punishments would be pointless (*83.1c*).

Elsewhere he makes the standard move of appealing to our experience of freedom and contingency in choice:

We are also led to this conclusion by the obvious signs through which it is apparent that a human being freely chooses one thing and rejects another (*QDV* 24.1c).

But none of this really captures Aquinas's attention; his interest is in the mechanisms that make free decision possible. In his view, the best argu-

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ment for the existence of free decision is a clear understanding of these mechanisms. Once we see that free decision can be accounted for in terms of other capacities that we don't doubt ourselves to have, there is no reason to fear that free decision is something unnatural or mysterious. As usual, Aquinas is working to take the mystery out of human nature.

7.4. Freedom

But perhaps I have taken too much of the mystery out of Aquinas's account? As I have described it, Aquinas's theory of free decision falls into the class of views now described as *compatibilist* – accounts on which freedom can coexist with cognitive and volitional systems that function in entirely deterministic ways, necessitated by the sum of prior events. Aquinas does not say that free decision is compatible with determinism – indeed, as I consider below, he often seems to say the opposite. As I have described his account, however, there seems no reason why he could not agree that the will is determined in its choices by intellect, that intellect is determined by prior acts of will and sensation, that those prior acts of will and sensation are themselves determined, and so on, without end.

This last section considers several ways in which the strongly rationalist account of §7.3 needs to be modified. But I will continue to insist that Aquinas was in fact a compatibilist *avant la lettre*. I don't mean that Aquinas was committed to any form of physical or psychological determinism (see **Demonology**, p. 357).¹⁵ Instead, my point is that Aquinas explains human freedom without any recourse to an uncaused, undetermined act of will or intellect – as if only an uncaused decision could count as a free decision. The least that can be said is that Aquinas did not see the need to introduce such mysteries. I would go farther: I believe that a central goal of his work on *liberum arbitrium* was to avoid the need for any such mystery.

My position may seem to fly in the face of Aquinas's full theory. One might charge that the foregoing has appeared persuasive only because I have focused selectively on one strand of Aquinas's thought. Other passages, especially ones from later in Aquinas's career, might seem to reflect a more libertarian (incompatibilist) outlook.¹⁶ Indeed, we don't need to look beyond the Treatise to begin to see the attractiveness of this libertarian reading. Each of the first four objections of 83.1 begins by setting out a necessary condition for free decision:

1. "Whoever has free decision does what he wills" (obj. 1).
2. "Whoever has free decision has it to will and not to will, to act and not to act" (obj. 2).
3. "That is free that occurs by cause of itself" (obj. 3).
4. "Whoever has free decision is in control of his acts" (obj. 4).

By working through these four conditions, we can test the merits of my compatibilist reading.

1. *Whoever has free decision does what he wills.* This first condition is readily satisfied by the account described in §7.3. Human freedom just does consist in having a will that is capable of choosing those actions that are judged to be preferable. The objection makes an issue out of this criterion only by appealing to cases of weakness of will, where it appears that we do not do the things we will to do. As we see in §8.3, however, Aquinas denies this analysis. When we succumb to weakness of will it is not that our will is overcome by other forces, but that the will itself makes a choice not in keeping with our overall desires.

2. *Whoever has free decision has it to will and not to will, to act and not to act.* This condition suggests the need for some sort of dual power on the part of will: the power, in a given situation, to make either one choice or the opposite. Such dual power is the hallmark of recent libertarian accounts of free will. It also figured prominently in scholastic debates after Aquinas's death. According to Peter John Olivi (1247/8–1298), human freedom requires that people be able, at the time at which they choose one thing, to choose instead its opposite. He explains this as meaning that “someone does one thing in such a way that at the same time he could have done the other while ceasing from the first – and vice versa.”¹⁷ Olivi was just one of many late-thirteenth-century philosophers to make such claims, and implicitly to attack Aquinas. But many of Aquinas's readers would suggest that Olivi and others were merely making explicit something Aquinas had already left room for.

Objection two, as Aquinas develops it, goes no further in suggesting anything like Olivi's dual power. It instead takes a theological turn, asking whether free decision is compatible with God's causal role in our lives. (See §7.4.3.) Elsewhere, however, Aquinas himself seems to leave room for dual power. In his early *De veritate*, he argues,

The will is not determined as regards its act. For with respect to a determinate object it can execute its act whenever it wills – or *not* do so. For it can engage in an act of willing as regards anything – and it can *not* engage (22.6c).

Elsewhere he affirms that “it is within the power of will itself to will and *not* to will,” and also within will's power to make it so that “reason actually considers or ceases from consideration, or considers this or that” (*SCG* III.10.1950). No doubt it was passages of this sort that led a group of Church theologians, in 1914, to set forth as the twenty-first of twenty-four “approved theses of Thomistic philosophy” that “among many goods, which are set out by a changeable judgment to be desired, the will chooses freely” (Denzinger 1967, n.3621).

All of this might suggest that the role of reason is simply to provide options, and that it is the will that freely chooses, selecting the option that it likes the best. But this would bring freedom into the picture at too late a point. In §7.3 we saw Aquinas taking great pains to show that human beings have free decision “from the very fact that they are rational” (83.1c). Rather than resting his account on the will's independence

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from reason, Aquinas explains freedom in terms of the will's being guided by reason:

Everything that has intellect and reason acts with free decision, insofar, that is, as its decision, by which it acts, *follows* the apprehension of intellect or reason, which is open to many different things (*QDM* 16.5c).

Here freedom is a matter of following the judgment of reason. The will's free choice is guaranteed by the intellect's openness to various options: there is no need to introduce some further freedom on the part of will. In the *Compendium of Theology* he writes,

That is free that is not bound to any one determinate thing. But the appetite of an intellectual substance is not bound to any one determinate good *because it follows the apprehension of intellect*, which concerns the good universally. Therefore the appetite of an intelligent substance is free, inasmuch as it is related in a general way to any sort of good (I.76 [134]).

In *ST* he makes the same point:

A human being is in control of his acts, and of willing and not willing, *because of the deliberation of reason*, which can be bent in one direction or another (109.2 ad 1; see 122ae 13.6 ad 3, 122ae 17.1 ad 2).

The libertarian reading of Aquinas severs this connection between freedom and deliberation, suggesting that we are free because the will remains undetermined by reason, somehow able to decide for itself what should be done, spontaneously, free not just from outside forces but even from the influence of deliberation. Whatever the attractions of such a view, it is not Aquinas's view. It sets at naught his careful efforts to explain the nature of human freedom.

The *Sentences* commentary contains a telling passage. Peter Lombard had described free decision as "a capacity . . . free in both directions [*ad utrumlibet*]: for it can freely be moved in one way or another" (*Sentences* II.25). Even this, notice, is not quite the sort of indeterminate spontaneity that libertarians look for. Lombard describes the will as *being moved*, not as spontaneously moving itself. Aquinas's treatment of that claim leaves no room for doubt:

Nothing acts except insofar as it is in actuality, and so every agent must be determined in one direction. For that which is equally disposed "in both directions" is somehow in potentiality with respect to both. And so . . . nothing comes from what is open to both unless it is determined. But the determination of an agent to some action must come from some *cognition* that preestablishes the end of that action . . . (II SENT 25.1.1c).

It is incoherent, in other words, to suppose that the will might be indeterminately free to choose one option or another, and might make that choice without being determined to do so.

The argument for ascribing some sort of libertarian indeterminacy to the will takes much of its force from Aquinas's later work. In 122ae 13.6,

for instance, Aquinas reconsiders the topic of 83.1, asking “whether a human being chooses of necessity, or freely.” Not of necessity, he says, because “a human being can will and not will, do and not do, and can also will this or that, and do this or that” (1a2ae 13.6c; see 1a2ae 10.2). On its face, this looks like an appeal to dual power. But Aquinas immediately goes on to trace such freedom to the indeterminacy of reason:

The explanation for this stems from the very power of reason. For whatever reason can apprehend as a good, toward this the will can tend. But reason can apprehend as a good not only willing or acting, but also *not* willing and *not* acting (1a2ae 13.6c).

On Aquinas goes, for the rest of the article, explaining how reason can always look at the good or the bad side of any particular course of action. Even here, the root of freedom is found in reason.

3. *That is free that occurs by cause of itself.*¹⁸ Aquinas attributes this maxim to Aristotle (*Met.* I 2, 982b26). What it first entails is that human beings move themselves toward their actions: “Free decision is the cause of its motion, because a human being through free decision moves himself to act” (83.1 ad 3). Aquinas immediately adds, however, that human beings need not be a first, unmoved cause of their action:

Freedom does not necessarily require that the thing that is free be the *first* cause of itself, just as one thing’s being the cause of another does not require that it be the first cause of that other (*ibid.*).

This defuses the second and third of the objections to 83.1, in that it opens the door to God as a cause of our actions. “God acts on us to will and achieve,” as Philippians 2,13 says (obj. 3), but yet God’s influence is consistent with our freedom: “his moving voluntary causes does not take away from their actions’ being voluntary” (ad 3). How this last remark should be taken depends on how one understands Aquinas’s broader views. A compatibilist might suggest a straightforward reading: an action can be voluntary, hence free, even when it is causally determined by God. Libertarians will take Aquinas to be making quite a different point: that God’s causal influence, however it works, does not causally determine human actions.¹⁹

Aquinas sometimes understands the above maxim in another way, so that not only human beings as a whole are their own causes, but even the will in particular is its own cause. “The will is in control of its act, and has it to will and not to will. This would not be the case if it did not have the power to move itself to will” (1a2ae 9.3sc). This passage incorporates the criteria of 83.1 objs. 2 and 4, and applies them to the will’s capacity for moving itself (i.e., being its own cause). This is not a point that Aquinas makes in the Treatise, and I have accordingly set the issue aside until now. Yet a complete account of Aquinas’s thinking requires attention to this point: by insisting on the will as the cause of its own choices, Aquinas gives his account a depth it would not otherwise have. Such self-movement does

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not in the least entail a move away from compatibilism, I will argue, but it demonstrates that Aquinas's thinking is far less crudely intellectualist than is sometimes supposed.

Why is it so important for the will to move itself? So far, we have seen Aquinas stressing the intellect's causal influence on the will. First, the will's freedom of decision is explained in terms of the intellect's capacity to deliberate over all sides of an issue. Second, the will is described as dependent on the intellect if it is to make choices at all: "it is necessary that every motion of the will be preceded by an apprehension" (82.4 ad 3). Generally, the will cannot operate until it is given some sort of causal determination; that determination, so far as we have seen, comes from intellect:

[T]he intellect is prior to the will, just as what produces movement is prior to the moveable, and the active to the passive. For the good that is an object of intellect moves the will (82.3 ad 2).

Doing away with the will?

It is easy to understand Aquinas's theory of human action in such a way that the will's role becomes trivial, even superfluous. Such extreme intellectualism might in fact seem appropriate, from a historical perspective. For it is sometimes said that ancient Greek philosophers, including Aristotle, lack the concept of will entirely, and that the will, as a separate faculty of the mind, was the discovery (invention?) of early Christian philosophers, in particular Augustine (Dihle 1982). William of Auvergne (ca. 1180–1249) expressed amazement that Aristotle and his Greek and Arab followers "pursued the intellective power with admirable industry and diligence, but seem not just to have neglected but even to have cared not at all about the will" (*De anima* III.7, 94a; see Teske 1995). What, then, could be more natural than for Aquinas's Aristotelian theology to offer a theory of human nature on which the will appears in vestigial form, included in name but emptied of content?

Yet if we find, as I maintain, that Aquinas's will does play a robust role in human action, then this too can certainly appear to be a natural historical development. What else would one expect from a Christian follower of Aristotle than to find at the heart of his Aristotelian theory of human action a thoroughly Christian, Augustinian understanding of the human will? Moreover, Terence Irwin (1992) has argued that Aquinas's theory of the will can plausibly be viewed as genuinely Aristotelian. If so, then Aquinas is not simply adapting Aristotle to Christianity, but shedding light on how Aristotle ought properly to be understood.

The picture so far is of will's being entirely subservient to the dictates of reason. The will is a separate faculty, Aquinas assures us in Q80, but its operation seems restricted in scope, confined to doing what the intellect tells it to do. Intellectualist accounts of this sort raise questions about whether the will is doing any substantive work at all. Like an administrator whose only task is to rubber-stamp directives sent down from above, the will seems relegated to the rather meaningless formality of endorsing what it cannot help but endorse.

Taken this far, intellectualism has to be suspect as an interpretation of Aquinas. By making the will's function trivial, it raises questions about why Aquinas did not eliminate the will altogether, on grounds of parsimony (see §6.2). Moreover, the sort of freedom ensured by such an account seems too limited in scope. Human beings would be distinct from other animals, in that only we would have the flexibility that comes from being able to subject our inclinations to deliberation. But still human choices would seem severely constrained by the findings of that deliberation. We would seem necessitated, not by the instincts of nature, but by the cold process of reason. We might still be free, in some sense, but we would not be as free as we ordinarily suppose: we would not, in particular, be able to go beyond or against reason. Further, such intellectualism seems badly at odds with the realities of human nature. Our choices are guided by reason, clearly. But since when are human choices *determined* by reason? Since when do we find ourselves compelled by what we rationally should do, even by those things that we *know* we should do? The intellectualist may be able to handle all these objections. But they should make us wary in ascribing such a view to Aquinas.

We can begin to understand the larger role that Aquinas wants to ascribe to will by noticing the kind of causal relationship that he sets out between intellect and will, even within the condensed scope of the Treatise. From one end, the will is the efficient cause that moves the intellect along with most of the soul's other powers (82.4c). This means that the intellect considers what the will tells it to consider: "the will wills the intellect's cognizing" (82.4 ad 1). From the other end, the intellect moves the will. But it does not exercise *efficient* causality on the will; it rather works by supplying information about the will's final cause, the object that has been judged to be good. "Something good that is grasped by intellect is the object of will, and moves it as an end" (82.4c; see *SCG* I.72.623). This is not to say that the intellect itself exercises *final* causality; the object itself should rather be considered the final cause (see §7.1). Aquinas elsewhere suggests that the intellect acts as a *formal* cause, insofar as it provides the formal principle that determines the act of will (1a2ae 9.1c).

However these various Aristotelian causes fall into place, it is clear that Aquinas wants to resist the idea that the intellect determines the will's choice in the way "that which pushes moves that which is pushed" (82.4c). More revealingly, "the intellect rules the will not as if by inclining it toward what it tends toward, but by showing it where it ought to tend" (*QDV*

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22.11 ad 5). By drawing these distinctions between types of causality, Aquinas is able to draw the important conclusion that the intellect never necessitates any choice on the part of will.

Choice is the final acceptance by which a thing is accepted for pursuit. This belongs not to reason, but to will. For however much reason prefers one thing over another, the one is still not accepted for action over the other until the will is inclined toward the one more than toward the other. *For the will does not follow reason of necessity* (*QDV* 22.15c).

This is a point that Aquinas does not even think necessary to make in the Treatise. As we have seen, he thinks that the will makes free choices because it *follows* reason, not because it is capable of resisting reason. Still, a full account of human action requires stressing the kind of causal links running from intellect to will, and the degree of independence this provides the will.²⁰

The will's choices are influenced by reason, not determined by reason. Yet, as we have seen, the will must be determined by something: the very fact that it is a contingent power, open to alternatives, entails that its choice is somehow determined. "A cause that is of itself contingent must be determined to its effect by something external" (19.3 ad 5). What determines the will, in the sense of being its efficient, moving cause, is the will itself: "the will's movement comes directly from the will and from God" (*QDM* 3.3c). Aquinas even suggests at times that this self-movement is essential for free decision. This is suggested in 1a2ae 9.3sc (quoted above), and also in 1a 105.4 ad 3: "If the will were moved by another in such a way that it were not at all moved of itself [*ex se*], then the works of the will would not be ascribed to merit or demerit."

The point is developed at greater length in the *De malo*. There, in a long discussion of "whether a human being has free choice over his actions or chooses of necessity," Aquinas announces that "in order to show that the will is not moved of necessity, one must consider the will's movement with regard to both the *exercise* of its act and the *determination* of its act" (*QDM* 6c). The first of these concerns whether or not to act, the second concerns whether to do one thing or another. As regards determination, the will is moved by its object, through intellect. As regards exercise, however, "it is clear first that the will is moved by itself." The content of the will's choice is determined by intellect, then, but the choice itself is determined by the will.

Why is this important? The point is sometimes taken to be merely that the will derives a certain marginal freedom from the capacity to refrain from making any choice at all. If the will chooses, it must do what intellect proposes. But the will is in control of its exercise, and so it need not make any choice at all.²¹ This would be a poor sort of freedom indeed. It would hardly do much to satisfy the above-mentioned sense of being able to choose whatever we *want* to do, of not being limited to the things we *think* we should do.

7. DESIRE AND FREEDOM

Aquinas has a more interesting point to make. The will moves itself, he explains, in cases where the will's choice to pursue a particular course is motivated by its choice to pursue a broader goal. I will to become healthier, for instance, and so I will myself to take a particular medicine (*QDM* 6c). There is of course nothing peculiar about the will's moving itself in this way; it often happens that we desire a certain end and are thus led to desire a certain means. To stress the familiarity of the process, Aquinas compares it to the way the intellect moves through an argument from premises to conclusions (12ae 9.3c). Just as the will moves itself, so too does the intellect. This talk of the will's being a self-mover should strike us as neither obscure nor problematic.

What Aquinas is introducing, roughly speaking, is higher-order volitions.²² This adds a further level of complexity to the account presented so far. Just as humans are distinct from other animals in virtue of our capacity to make judgments about our judgments (§7.3), so we are distinct in a further way because of our ability to have volitions that direct our volitions. Human lives, for this reason, are only partly governed by rational deliberation. Such deliberation always proceeds down a fairly narrow track, because we have higher-order views about the kinds of goods we are interested in pursuing. If a period of leisure time opens in front of me, I will have higher-order desires that govern the kinds of activities I will consider. Within that range, my choice may be fairly wide-open, but alternatives outside the range will be foreclosed from the start: they simply don't satisfy my broader interests.

It may not seem that Aquinas can gain very much by complicating his account in this way. Although the maneuver focuses the attention on will for a moment, the ball may very quickly seem to be back in intellect's court. How are these higher-order volitions determined, after all, if not by intellect? I want the medicine because I want to be healthy, but surely I want to be healthy because reason favors this course. Higher-order volitions look like mere epicycles in a fundamentally intellectualist account.

To see how Aquinas is giving the will a real role in the process of choice, we need to focus not on sudden desires for a certain end, but on long-term dispositions that govern our day-to-day choices. The will does not simply endorse the passing judgments of reason, in a neutral fashion, but subjects those judgments to the higher-order aims that shape who we are. The will, in other words, contains habits or dispositions that influence the course of its operation (see 12ae 50.5). Reason may tell us to cheat, but the will can insist on honesty; reason may counsel silence, but the will can urge us to speak. In such cases it is the will that is in control, in virtue of its fixed dispositions and desires, which hold independently of reason's dictates (considered in the short term). The will cannot entirely repudiate reason, but the will shapes reason just as much as reason shapes will. The will can, for instance, force reason to stop thinking about something. Also, the will can direct reason to look at something in a different way. (For example, don't think about what you might buy with the money you found; think

Voluntarism

Modern scholarship tends to measure scholastic theories of the will in terms of the degree to which a theory subscribes to voluntarism. But a close look at the theories themselves reveals that most of this talk of voluntarism and intellectualism is empty rhetoric. Aquinas's critics rallied to defend the will in the way that modern politicians rally to defend the flag or family values. In actual fact neither Aquinas nor his more intelligent defenders ever denied that the will plays a leading role in the process of choice and action. If a voluntarist is someone who holds that the will is what controls human choices, then Aquinas is as much a voluntarist as anyone on the medieval scene.

Where Aquinas and his opponents differ is over a strictly metaphysical question: Does it make sense to describe the will as an unmoved mover, a first cause that needs no prior determination? Aquinas insists that the will is not a first cause in this sense. But this does not show that Aquinas is somehow less of a voluntarist, or more of an intellectualist. After all, he doesn't think that the intellect can be a first cause in this sense either. See Pasnau (1999b) for further development of these claims.

about how happy someone will be to get it back.) In such cases our higher-order desires take charge over the process of deliberation, turning our thoughts in the directions in which we want them to go.²³

Aquinas gains much from complicating his account in this way. First, he connects his action theory with his moral theory, inasmuch as crucial virtues (justice and charity) just are dispositions of the will (see 1a2ae 56.6). Second, he gives his account an added measure of realism. Human choices can now be explained not just in terms of rational calculations, but also in terms of our deeper commitments. Third, free decision now takes hold in another dimension. Until now that freedom has seemed to consist entirely in reason's capacity to make one judgment or another – its being open to alternatives. Now we can see how the will might be free to accept or reject that judgment. The dictates of reason may or may not conform to our higher-order volitions.

Ultimately, human freedom remains rooted in reason. Our higher-order volitions themselves are determined by reason – or, if they are not, then at least they are subject to change (hence not necessitated) in virtue of our rational capacities. This is as it should be, not just because it is what Aquinas constantly says, but because we should not aspire to give the will the sort of freedom that would sever it from the control of reason. Aquinas views the relationship between reason and will as a back-and-forth exchange, extending over the course of our lives so that, time after time,

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it is again necessary that the motion of will precede counsel, and counsel precede the act of will. And since this cannot go on to infinity, it is necessary to postulate, with respect to the will's first motion, that the will . . . is moved by something external, by the impulse of which the will begins to will (*QDM* 6c).

This initial impulse comes from God, who not only creates the human soul but somehow puts the soul into motion, beginning the long dialogue between our rational powers.

None of this rests on indeterminate, uncaused motion. In saying that the will moves itself, Aquinas is not contradicting his general maxim that "the same thing is not the cause of itself" (19.5c). Nor does he want to make the will some sort of peculiar first cause. Rather, "it is necessary that the will be moved to will by something" (1a2ae 9.4c). If lower-order volitions are brought about by higher-order volitions, still those higher-order volitions themselves must have come from somewhere. Although all voluntary actions come from within, this is not meant to apply all the way back to first causes:

The voluntary is characterized by its principle being internal, but this intrinsic principle need not be a *first* principle, unmoved by anything else. So voluntary motion, despite having a proximate intrinsic principle, still has its first principle from without – just as the first principle of internal motion (that which moves nature) comes from without (1a2ae 9.4 ad 1).²⁴

The story must eventually end with God, or some other external agent, because human choices do not spring out of thin air. Like all of the natural world, events demand causes, and causes have prior causes. Here the difference with later libertarian thinkers is pronounced. Olivi, for instance, describes the will as a completely sufficient cause for its choosing one alternative over another: "If one is asked why [a volition] ceases . . . , it is fully sufficient to reply by saying that it was completely and sufficiently able to cease" (*II Sent.* Q57 ad 5). Olivi claims that demanding any further explanation leads to the destruction of free will. Aquinas, in contrast, insists on following explanations to their end. He is characteristically confident that philosophical analysis will lead to the truth, no matter how disconcerting that analysis may initially be.²⁵

4. *Whoever has free decision is in control of his acts.* My argument so far has been that human beings are in control of their acts because of a capacity for higher-order judgments and higher-order volitions. But in insisting on a compatibilist reading of Aquinas, it may well seem that I remain vulnerable to the charge that we ultimately lack control. If all of our choices are causally necessitated, then eventually the causal chain must move outside of us, and so ultimately it must be the case that our present choices are determined by factors that we cannot control. Aquinas himself puts this worry clearly: "The freedom of free decision requires that someone be in control of his own act. But any agent whose act is caused by some prior agent is not in control of his act" (*II SENT* 25.1.1 obj. 3). In the face of this sort of charge, it does no good to appeal to higher-order judg-

ments and volitions, because that just moves the problem back a step. We can always ask again where these higher-order events come from, and unless we invoke an absurd infinite regress, it seems that eventually we must lose control of our choices.²⁶

If causal determinism were true then my current choices would be determined by events that happened long before I was born. How – the libertarian asks – could we then be free? The compatibilist has no defense against this line of attack, other than to suggest that it is a mistake to suppose ourselves so in control of our choices. It just is true that the causes of our actions extend beyond our reach. Ours is human freedom, not divine freedom: “freedom does not necessarily require that the thing that is free be the *first* cause of itself” (83.1 ad 3). Aquinas considers the objection that “we are not in control of that which occurs of necessity” (82.1 obj. 3). Time after time he draws this connection, even taking for granted that what occurs necessarily cannot occur freely (1a2ae 13.6; *QDM* 6). In the end, the greatest difficulty with a compatibilist reading of Aquinas may seem to be just this insistence that human beings do not choose of necessity.

To decide whether a compatibilist reading of Aquinas founders on this objection, we must decide what Aquinas means when he says that “the will does not will of necessity all the things that it wills” (82.2c). There is strangely little to go on. Aquinas remarks at the start of 82.1 that “the necessary is that which cannot not be,” and he goes on to distinguish four different ways in which a thing can be necessitated. But none of this is very relevant to the present question. Aquinas’s reply to the objection from necessity is also not decisive: he says that “we are in control of our acts inasmuch as we can choose this or that” (82.1 ad 3). But what sense of ‘can’ is at work here? For the libertarian, there are some choices the will makes that are not necessitated even given the entire state of the universe. Let the world be just as it was, and let me choose again, and I could make a choice different from the first time. Does Aquinas mean all of this?

There are hints that Aquinas understands ‘necessity’ in a way weaker than libertarians would want. He begins one discussion of whether the will chooses all things of necessity by stipulating that “something is said to be necessary which is unchangeably determined to one thing” (*QDV* 22.6c). Later he says much the same: “it cannot be said that necessity is the cause of human actions, because things come of necessity that always stand in the same way” (*QDV* 24.1 sc 7). A libertarian could make do with such definitions, taking them as meaning that the same causal antecedents “always” lead to the same result. But Aquinas’s point seems rather different. In saying that human choices are not necessary, he appears to be denying that human beings, simply on account of their nature, “always” and “unchangeably” do the same things.

The contrast I am proposing can be made clear in light of a distinction Aquinas offers (19.3c, 3a 46.2c) between two ways in which a thing is said

to be *necessary*: absolutely and conditionally (*ex suppositione*). It is absolutely necessary that a human being is an animal, because the predicate is contained in the definition of the subject. It is also absolutely necessary that human beings will happiness, because our desire for happiness comes from our very nature. In general, natural appetites are absolutely necessary: trees send shoots up and roots down, as a consequence of their nature. Because trees do this of necessity, there is no question here of freedom. Animals are in a somewhat different position. Bees make honeycombs, of necessity. But bees do not always build their honeycombs in the same place, and they do not always fly off in the same direction. There is, then, no absolute necessity for the bee to fly in a certain way. But there is conditional necessity: given a certain environment, the bee will inevitably react in a certain way. Aquinas sees the story as fundamentally the same for all nonrational animals: dogs inevitably bark when provoked, sheep inevitably flee wolves (see §7.2). Not every sheep flees wolves, of course, because not every sheep will encounter a wolf. The actions of animals are “unchangeable,” then, only when the presence of certain stimuli is held fixed. Their actions are necessitated by the combination of nature and environment.

Human beings are also subject to conditional necessity. Given the entire state of the universe, including an individual’s higher-order beliefs and desires, a certain choice will inevitably follow. But one can concede this and still insist on an important difference between the actions of humans and other animals. When animals are hungry and see food, they necessarily desire the food; if they can, they eat it. We are more complex: “it is not necessary that when appetizing food is present, the will desires it” (*QDM* 6 ad 21). Even if we are hungry, we may resist the food. We may have given up meat, we may be dieting, we may suspect the food will make us sick. Our higher-level beliefs and desires can take control of our immediate judgments and appetites: as a result, we do not necessarily eat the food, or even necessarily desire it.²⁷

This difference between us and other animals is fundamental enough to warrant the conclusion that only we are in control of our actions. There is conditional necessity in both cases, but only in our case do the relevant conditions include factors that we identify as distinctive elements in our own personal character. The sheep must flee, given (a) its nature and (b) the presence of a wolf. This is something it plainly has no control over, because it cannot change its nature and cannot make the wolf disappear. Human beings must make certain choices, given (a) their natures, (b) the surrounding circumstances, and (c) their higher-order beliefs and desires. But the last category includes features that constitute our individual identities. When we act according to these deeply held inclinations, we feel we are making our own choices: choices that reflect us as individuals rather than as merely members of a species.²⁸

It is tempting to say that we determine these long-term goals: that we can make ourselves the sort of person that stands and fights. Here, however,

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the libertarian will rightly object that for a compatibilist these goals and values cannot *really* be up to us: they too must be determined by our nature and by the surrounding circumstances. Adding higher-order links in the chain only prolongs and perhaps obscures the inevitable necessity of any particular choice. Even so, these distinctions matter. It would be bizarre, for instance, to deny the fundamental difference between the actions of animals and the actions of plants. Even if the processes are equally determinate, there is clearly a sense in which the actions of animals are *in their control, up to them, and voluntary*. It would be absurd to deny that animals do, in some sense, determine their own actions. It would be equally absurd to deny that we determine our own actions, in a fundamentally deeper way. Perhaps we too do not escape the chains of causal necessity. But if we are determined, we are determined by our own beliefs and values, not simply by the brute design of nature and the happenstance of events. This difference, for Aquinas, makes all the difference.

Will and temptation

Et stultorum infinitus est numerus.

Ecclesiastes 1,15

Although there is nothing problematic in principle about attributing a will to human beings (§8.1), Aquinas makes considerable trouble for himself by insisting that the will is a strictly rational appetite – that in some sense it never goes against reason (§8.2). This leaves Aquinas with the need to explain the obvious and familiar fact that people are sometimes overcome by temptation, even when they apparently know better (§8.3). His account of weakness of will derives much of its plausibility from his insistence that human reasoning is not confined solely to the mind, but relies crucially on the internal senses of the brain, especially imagination and the cogitative power (§8.4). The passions, which influence our choices through these internal senses, can be controlled with difficulty and must be controlled, if we are to lead a virtuous life. But this does not mean that a virtuous person can (or should) live without emotion (§8.5).

8.1. Is the will a myth?

The previous chapter took for granted that Aquinas is entitled to the notion of a will, a separate faculty of the soul through which we form desires for the things that reason perceives to be good. It is common enough in modern philosophy to talk about *free will* while holding onto grave doubts about the propriety of talking about *will*. The locus classicus for such doubts is Gilbert Ryle (1949), who rails against the trinitarian dogma of a Mind or Soul composed of three parts, Thought, Feeling, and Will. Ryle takes on this trinity at what he evidently regards to be its weakest point; he sets out to “refute the doctrine that there exists a Faculty, immaterial Organ, or Ministry, corresponding to the theory’s description of the ‘Will’ . . .” (p. 63).

I want to suggest that such doubts about the will are at least misguided, if not positively absurd. They are no less absurd, at any rate, than are doubts about the existence of an intellect, or even a mind. If we feel confident in ascribing an intellect to ourselves, on the basis of our capacity to think and reason, then we should feel equally comfortable with the notion of will, on the basis of our capacity to desire and choose the things we believe we should have. Ryle does not doubt that we have desires and make

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choices. What he doubts is that we have volitions, “special acts, or operations, ‘in the mind,’ by means of which a mind gets its ideas translated into facts” (p. 63). No doubt the word ‘volition’ is an ugly one, foreign to ordinary language. But is it not still the case that the mind does translate its ideas into facts? And if so, can we not speak of the acts or operations in virtue of which this occurs? If so, then the force of Ryle’s criticisms seems to rest entirely on the way such acts are treated as “special.” There seems nothing inherently objectionable in the concept of a will, when conceived as the capacity through which we decide which of our ideas shall be acted on (“translated into facts”).

There is of course much to be criticized in the particular details of how philosophers have traditionally conceived of the will and its operations. It is probably misleading, for instance, to conceive of the will as a single power. Choice is likely to be a complex process – or, better, a complex family of processes – executed by various interlocking mechanisms. Still, this gives us no special reason to doubt the existence of will, because we could say much the same for our other familiar mental powers: intellect, reason, sight, memory, and above all the mind itself. Of course there is a sense in which *the* will does not exist. But in that same sense, neither does *the* mind.

The strategy I am here pursuing is very much Aquinas’s strategy.¹ In 80.1 he argues for appetite as a distinct capacity of the soul by identifying a special sort of inclination that all animals must have. Let this special sensory inclination be referred to as sensory appetite (see §7.2). In 80.2 he distinguishes sensory appetite from will, and defines the latter as that which inclines us toward objects conceived by reason. So if we ever have rational inclinations, we have a will. These are both textbook cases of Aquinas’s general methodology: that the best way to analyze the soul is to begin with the actions we know ourselves and others to engage in, and to distinguish the soul’s different faculties on the basis of these different actions (§§6.2 and 11.2).

8.2. Must the will be rational?

Although it is reasonable, and useful, to define the will in such a way that its existence is uncontroversial, that procedure leaves important questions about how the will should be conceived. Aquinas defines the will as rational appetite, and in this chapter I will consider whether such a conception of will is defensible. There are two broad kinds of difficulties to be considered. First, there is a question about why we should suppose the will’s choices are always, in some sense, rational. Why, in other words, should we think that the things we will must always be funneled through reason? (§8.2) Second, given that reason does play this sort of essential role, how can we account in any plausible way for cases where we seem to act willingly and yet go against reason? (§8.3) Specifically, what role do nonrational desires play in tempting us to ignore what we know we should do? (§§8.4

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and 8.5) It was with all of these concerns in mind that Thomas Hobbes raised an objection far more serious than anything found in Ryle:

The Definition of the *Will*, given commonly by the Schooles, that it is a *Rationall Appetite*, is not good. For if it were, then could there be no Voluntary Act against Reason. For a *Voluntary Act* is that, which proceedeth from the *will*, and no other (*Leviathan* 1.6, pp. 127–28).

Hobbes does not reject the concept of will entirely, but proposes redefining it as “the last Appetite in Deliberating,” the ultimate inclination that impels someone to act, regardless of whether that impulse springs from reason or mere desire. The result Hobbes wants is that actions may be voluntary even when they “have their beginning from Covetousnesse, Ambition, Lust . . . Aversion, or Feare.”

In certain key respects Hobbes and Aquinas are in agreement. They agree, most importantly, that voluntary actions are all and only those actions that proceed from the will. (See 1a2ae 6.7c: “a thing is called voluntary as a result of the will’s being drawn to it.”) Latin directly links what is voluntary (*voluntarius*) with the will (*voluntas*), and it is natural to suppose that both Aquinas and Hobbes were influenced by this linguistic connection. But there is a deeper reason why Aquinas should have insisted on the link, and why Hobbes should preserve it even when writing in English. The will has a place in our thinking only insofar as it is tied to some more familiar activity (see §8.1). Both men use the phenomenon of voluntary action, then, as an anchor to hold in place their accounts of the will. Insofar as we have a clear notion of what a voluntary action is, we can use that to help locate the will as what takes us from thoughts to such actions. Neither one could, as their theories stand, countenance voluntary human actions that do not involve the will. How would such an action be chosen, if not through will? And if not chosen, how is it voluntary? Severing the tie between the will and voluntary action would lead to the displacement of a series of other concepts, and ultimately require an entirely different theory of action.²

Aquinas and Hobbes also agree that actions based on nonrational desires such as lust can be and typically are voluntary. Aquinas is very far from supposing that we are never motivated by such impulses: “Only the wise resist their bodily inclinations, and they are few compared to the foolish, for *there is no end to the number of fools*” (*QDV* 22.9 ad 2, quoting Ecclesiastes 1,15). But although the fool acts on the basis of bodily temptation, nevertheless the fool acts voluntarily. (If the fool did not act voluntarily, he could not be blamed. For “one should not punish what is involuntary” (*QDV* 22.9 ad 3).) So nonrational desires must work through will. In contrast with Hobbes, Aquinas holds both that the will can be a strictly rational appetite and that the will can make foolish choices as a result of being tempted by our bodily desires.

Aquinas faces considerable difficulties in making this view work. The difficulties do not come quite as quickly as one might suppose, however.

There is no initial contradiction in the idea of a *rational* appetite doing things that are *foolish*. Aquinas is not at all troubled by the thought that the will regularly chooses foolishly, even irrationally. The will is not a rational appetite in the sense that it always makes the choice that is, all things considered, most rational. To identify the will as rational appetite is simply to identify the source of the will's choices. The will chooses that which reason judges to be best. So if reason can make foolish judgments, the will can make foolish choices.

Yet notice that, for Aquinas, the will's foolishness seems to be entirely a consequence of reason; the alleged fact that there is an endless number of fools in the world is taken in its literally intellectual sense. The inability to resist passion seems to be a rational failing, not a weakness of the flesh or a weakness of the will (but see §8.3). This is difficult to accept for various reasons. First and foremost, it is difficult to think that Aquinas's story can be made to fit our everyday experience of how the passions motivate us. When we act under the influence of the passions it seems as if the passions take control. It does not seem, at least *prima facie*, that the passions are doing their work through reason, by subverting it. The passions rather seem to bypass reason altogether, to force reason out of the loop and to make its voice for a time ineffectual.

In insisting that the passions must work through reason, rather than around it, Aquinas is taking the Stoic side in an old debate. The Stoics rejected the traditional distinction between rational judgment and nonrational passion. In contrast to Plato and Aristotle, who held that the passions work independently of (and often contrary to) reason, the Stoics understood passion as a form of judgment, an excessive judgment that goes beyond what is reasonable.³ Aquinas does not believe that the passions are a form of intellectual judgment, but he takes the Stoics' side insofar as he agrees that the passions can motivate us only if reason assents to their influence. We have already seen the three assumptions that force him in this direction:

- (1) The passions can (and regularly do) induce voluntary actions;
- (2) Voluntary actions must be chosen by the will;
- (3) The will is a rational appetite.

Of these, only (2) and (3) seem open to reasonable doubt. We have seen how Hobbes accepts (2) and denies (3), and on behalf of (2) I have argued that it furnishes us with a clear and robust conception of what the will does (and therefore what it is). So what are we to make of (3)?

The Treatise introduces the will in 80.2, where Aquinas divides appetite into two distinct capacities, sensory and intellective (i.e., rational). The *sed contra* appeals to Aristotle, noting that the *De anima* distinguishes two appetites, higher and lower. This is not a text that will bear much weight, however, since just before distinguishing three kinds of appetite, will (*boulêsis*), concupiscence (*epithumia*), and anger (*thumos*), Aristotle remarks of the appetitive faculty that "it is absurd to split it up" (III 9,

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432b4–5).⁴ Of course, appeals to authority are often largely ornamental; what matters is the argument. Here Aquinas faces a problem. His familiar procedure is to distinguish capacities on the basis of their actions, and their actions on the basis of their objects (see §§5.1 and 6.2). But as the first two objections explain, the objects of rational and sensory appetite are the same: “appetite is a movement from the soul toward things, which are singulars, and so *every* appetite seems to concern something singular” (obj. 2). The fact that some desires are triggered by intellect, others by the senses, does not seem to warrant postulating two separate capacities: “it is accidental to an object of appetite that it is apprehended through sense or intellect” (obj. 1).

Aquinas denies this last claim. Even though the things that the will desires can be the same as the things that the sensory appetites desire, Aquinas insists that we need to consider *how* such objects are conceived. Appetitive capacities, he argues, are by nature passive capacities. But the object of a passive capacity is that which acts on it (see §5.1). Accordingly, appetitive capacities are distinguished according to the differences in what acts on them. Since the things we apprehend are what act on our appetites, differences in what we apprehend entail differences in our appetitive capacities. But of course there is a tremendous difference here: “what is apprehended by intellect is of a different genus than what is apprehended by sense” (c) – the former being apprehended as universal, the latter as particular. As a result, “being apprehended through sense or intellect is not accidental to an object of appetite, but holds *per se*” (ad 1).

This brief and perhaps arid-looking argument is interesting in several ways. First, it depends on describing the appetites as passive: “an appetitive capacity is a passive capacity that is naturally suited to be moved by something apprehended” (80.2c). In making this move, Aquinas exploits an ambiguity in what the object of an appetite is. The objections assume that the object of an appetite is the thing the appetite inclines toward. Aquinas focuses on a different object: that which moves the appetite. Consider a case, then, in which I have both a sensory and a rational desire for an orange: I crave the orange, just for its taste, and desire it for its nutritional value. According to the objections there is no difference in objects. But according to Aquinas there is, because what moves my sensory appetites is a specific sensory stimulus, triggering stored sensory impressions, whereas what moves the will is a conception of this orange as being of a kind (nutritious) that I value.

This line of argument would lead to controversy in later debates over free will, where scholastics argued endlessly over the will’s alleged passivity. Such controversy seems misguided. Like almost everything in nature, the will has an active and a passive side: it both moves other things and is itself moved. Aquinas himself goes on to describe the will as “a moved mover” (80.2c), and in other contexts he stresses the will’s active side (see §7.4). We should say, then, that an appetitive capacity has two sets of objects: those acting on the appetite, and those the appetite tends toward.

1270

Alarmed at the growing influence of Aristotelianism within the University of Paris, Bishop Stephen Tempier took matters into his own hands. In 1270 he condemned thirteen propositions and excommunicated all who “have knowingly taught or asserted them” (see Wéber 1970; Wippel 1995, pp. 14–18). The ninth of the thirteen propositions was the following: “That free decision is a passive capacity, not active, and that it is moved of necessity by an object of appetite.”

It may well be that Aquinas was one of the targets of this proposition. Moreover, it is sometimes suggested that the condemnation moved Aquinas to rethink his theory of the will in dramatic ways – specifically, by placing much greater stress on the will’s activity and freedom. This suggestion has little merit (see Westberg 1994a). Aquinas never stops describing the will as passive, even after 1270. (See, for instance, 1a2ae 9.4c, where he explains how the will, in order for it to will, “is necessarily moved by something.”) And there would have been no reason for Aquinas to reconsider his views in light of the condemned proposition. For he never claims that the will is “not active,” and he steadfastly insists that the will is not “moved of necessity” by its object. That the will is passive, in Aquinas’s sense, does not preclude its being both active and free.

Aquinas’s view seems to be that a difference on either end (input or output) makes for a difference in capacities. Here he stresses the will’s passivity not from any conviction about how best to understand free will, but simply from the exigencies of the argument being made.

But now a second interesting issue arises: How are we to determine when the inputs count as being the same, and when they are sufficiently different to warrant a distinction in capacities? The argument of 8o.2c rushes by the question:

Therefore, since what is apprehended by intellect is of a different genus than what is apprehended by sense, it follows that intellectual appetite is a different capacity than sensory appetite.

This is all we get, and as it stands it is woefully inadequate. Apples and oranges are different in genus, and yet Aquinas is not proposing separate appetitive capacities in that case. The problem is that, for Aquinas, *genus* and *species* are not absolute concepts, and so although at one level apples and oranges fall into different genera, they nevertheless are common members of many higher genera. So we can rephrase our question: When does a difference in genus between objects yield a difference in capacities? (Cajetan notes the potential gap in the argument, but is unconcerned by

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it, remarking only that “intelligible and sensible being are obviously different genera” (80.2.XI.).)

The question reasserts itself in 81.2, where Aquinas distinguishes sensory appetite into a concupiscible and an irascible component. Predictably, he defines the concupiscible and the irascible in terms of their objects, but here their objects are the things they incline us toward – their outputs rather than their inputs. Through the concupiscible power, Aquinas writes, “the soul is inclined simply to pursue what is agreeable to the senses and to flee what is harmful.” Through the irascible, “an animal resists those forces that thwart the agreeable and bring harm” (81.2c). Here, the exigencies of the argument lead Aquinas to focus on the active side of the appetitive powers.⁵ This confirms the earlier impression that a difference on either end makes for a difference in appetites. But still it is unclear why the distinction between pleasure and combat yields distinct sensory appetites, whereas the rational appetite remains unified.

Aquinas explicitly addresses the latter issue in 82.5: “Is the will distinguished into the irascible and the concupiscible?” His argument for the negative rests on his identifying a single unifying object for the will. The will, he argues, desires all things “under a general conception [*ratione*] of the good” (82.5c). This is something that the sensory appetites cannot do; they are incapable of grasping universal natures, and as a result “the parts of sensory appetite are made to differ by the different natures of their particular goods” (c). All of the will’s desires, in contrast, stem ultimately from one basic judgment: *this is good*. Everything we rationally desire we desire because it contributes to our general conception of what goodness is. Because the will’s inclinations are unified in this way, the will is a single capacity. There is no such unity in the case of the sensory appetites. Because there are two incommensurable sides to sensory appetite, one aimed at pleasure and the other at combat, it is reasonable to describe these as two separate capacities.⁶

Aquinas’s reason in 82.5 for insisting on the will’s unity points toward his reason for insisting that the will, and only the will, is a rational appetite. The key question is this one: when does a difference in genus between objects yield a difference in capacities? Aquinas’s answer is that it does so when that difference in genus leads to a fundamental difference in how the capacities operate. Apples and oranges, different as they are, stimulate appetites of the same kind. But judgments based on a general conception of the good produce desires of a sort different in kind from those produced by mere sensory impressions. Aquinas sets out the difference earlier in 1a, in considering whether angels have a will:

Some things are inclined to the good by a cognition through which they cognize the very nature of the good, something distinctive of intellect. This is to be *perfectly* inclined to the good:

- not by being solely directed by another to the good, like things that lack cognition,

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- and not by being inclined to the good only in particular ways, like things that have only sensory cognition,
- but by being inclined to the universal good itself. This inclination is called the will (59.1c).

Our sensory appetites are little more than mechanical reactions to sensory stimuli. A rational appetite, in contrast, selects its goal from among various alternatives, measuring the extent to which a given alternative satisfies the agent's conception of what is good (see §7.4.3). This is what it is to act for a reason. Because the will takes reasons for its inputs, the will's operation is different in kind from the operation of the sensory appetites. "Mover must be proportioned to moveable, and active to passive" (80.2c). A difference in inputs dictates a difference in capacities.⁷

These considerations shed light not just on

(3) The will is a rational appetite

but also on

(2) Voluntary actions must be chosen by the will.

Once Aquinas links the will's desires with acting for reasons, it immediately becomes more plausible to suppose that all voluntary actions are chosen by the will. When we act as human beings, performing what Aquinas will call "human actions," we make choices based on reasons, choices motivated by an understanding of the goal one is pursuing and the relationship of that goal to one's more general desires. Aquinas does not argue for (2) until 1a2ae Q6, and so this is not the place to enter into a detailed analysis of these issues. But the general line of the argument is clear enough.

In light of all this, it is no wonder that Hobbes and Aquinas find themselves in disagreement on whether the will is a strictly rational appetite. Hobbes's materialism and rigid determinism leave him with little reason to see a fundamental divide between rational and sensory appetite. For Aquinas, the will's mode of operating is tightly connected to its immateriality and freedom (see §7.3).⁸

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The will's immateriality entails that it has no passions in the strict sense of the term. The will does have desires that appear to count as concupiscible and irascible: the craving for wisdom, for instance, or anger in the face of vice (82.5 obj. 1). But such desires are merely analogous to the kind of craving and anger present in sensory appetite. In sensory appetite, such affections or emotions are passions, and passion – in the strict sense – always involves some sort of bodily transformation: "anger, joy, and all such passions occur with some transformation to the body" (75.3 ad 3). The will does have emotions of a sort; it is legitimate to speak of the will's being

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angry, or being in love. But the will's emotions are different from our more familiar bodily emotions. "The will can be called irascible inasmuch as it wills to combat the bad on the basis of a rational judgment, rather than on the basis of a passionate impulse" (82.5 ad 2). When the will is angry, there are no accompanying bodily indications – no trembling of the hands or turning red in the face – unless the sensory appetites are likewise inflamed. Such emotion is not passion in the strict sense, but "a simple affection,

Love and pleasure

From some perspectives the will can seem almost superfluous – little more than a clerk that mindlessly rubber-stamps whatever the intellect judges to be good. This picture of will is much too simple, even in the context of Aquinas's theory of human choice (see §7.4). But the theory of human choice itself affords far too limited a perspective on what the will does. A full account of the will requires a treatment not just of how we select and pursue certain goods, but also of how we *enjoy* the things we possess. Consider God and the angels. Aquinas says that both have wills, even though neither has unfulfilled desires. The will "possesses not just the act of desiring [*appetat*] what it does not have, but also of loving what it does have and enjoying it" (19.1 ad 2; see 59.1 ad 2).

Love is "the first movement of the will and of every appetitive power" (20.1c). Because Aquinas extends the concept of love so broadly, he is forced at times to speak rather mechanically about it; at the most general level, love is "an aptitude or proportion of an appetite to the good" (1a2ae 25.2). In this sense we can say that plants love water. Aquinas has more to say about intellectual love. To love someone, for example, is to will the good for that person (20.1 ad 3). Charity, the love of God, is the will's highest state of perfection (82.3 obj. 3 and ad 3).

As everyone discovers, we can love what we do not possess. But – perverse cases aside – the will does not stop loving what it succeeds in possessing. And when the will is fully at rest in the good that it loves, it does not cease to function; on the contrary, it then experiences pleasure (*delectatio*) (1a2ae 34.1). Aquinas has a special term, *fruitio*, to talk about the will's enjoyment of what it has achieved. We enjoy only ultimate ends, not the means to such ends (1a2ae 11.3). The more ultimate the end, the greater our enjoyment. Strictly, *fruitio* comes only when we attain God; nothing else is all that enjoyable. This may seem rather grim, but Aquinas goes on to explain how we can imperfectly enjoy what we have not yet attained (1a2ae 11.4). We refer to this as anticipation.

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without any passion or arousal of the spirit" (82.5 ad 1). This sort of simple affection, free from the turbulence of physical passion, is what God and the angels experience. This is what we will experience, too, if we ever exist as disembodied souls (77.8 ad 5; see 12§3). But having a body changes everything.

Because we have a body, we are vulnerable to passion. Aquinas takes our strongest passions to be those that are essential to our survival, in particular the desire for sex and for food (2a2ae 141.4c, 155.2c). The passions just are the activities of sensory appetite: "every movement of sensory appetite is called a passion" (1a2ae 35.1c). In the same way that choosing is an operation of the will, so desiring food, and so on, is an activity of the concupiscible power. The irascible and concupiscible appetites are responsible for all of the familiar passions, from anger to love, plus some bodily states that we might not count as passions, such as pain.⁹

The passions involve the body, but Aquinas does not want simply to identify the appetitive state with the bodily state. "The cause of pain is in the body," he holds, "but the movement of pain is always in the soul" (1a2ae 35.1 ad 1). In discussing the appropriate definition of anger, Aquinas stresses that one gives only a partial account in describing anger as "the heating of blood around the heart" (*InDA* I.2.173). A full account must describe not just the matter, but also the form of the passion: that anger is "an appetite for revenge" (I.2.170; see *QDM* 12.1c). It is not clear how to understand such remarks. As with Aquinas's account of sensory perception (§2.3), there is room for disagreement over whether Aquinas is in any sense proposing a materialist theory of the passions. Moreover, even if we decide to identify the theory as a version of materialism, as I would, it is not clear what the relationship will be between the physical manifestations of the passion (e.g., turning red in the face) and the actual appetitive component (e.g., an inclination for revenge). Aquinas simply sidesteps these issues when he remarks that passions "occur with some transformation to the body" (75.3 ad 3). He is entitled to be vague, at this point, because the 1a2ae considers such questions at length. For present purposes it is enough simply to note that the activities of sensory appetite are passions, and that passions always come with some transformation to the body.

The Treatise's most important discussion of the passions comes in 81.3, where Aquinas takes up the question of whether the irascible and concupiscible appetites obey the mind (i.e., reason and will). Aquinas's answer is mixed; it turns out that the passions generated by sensory appetite are partly, but only partly, under control. Before considering how we control the passions, and why that control is limited (§8.5), it is important to look at why this issue matters. The passions are unavoidable for fallen human beings in this life. The mere fact that we have passions is in itself neither good nor bad: "we neither merit nor demerit through our passions" (*QDM* 3.9 ad 15). Unregulated passion is a sin, but because the sin is unavoidable, it is merely a venial sin. Even so, the passions are of tremendous significance, because of their effects. They cause irrationality, and irrationality

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causes us to perform wrong actions. As a theologian, Aquinas is most interested in wrong action in the moral sense (see §In.5), but that is just one special case of the more general phenomenon. Your passion for literature may lead you to stay up all night, night after night, reading. As a result you cannot concentrate during the day, and other parts of your life go badly. There need be nothing immoral in such a case; you are simply acting in a way that is not in your best interest. The passions are dangerous because they are liable to distort one's judgments about what is best.

Following Aristotle, Aquinas distinguishes between *intemperance* and *incontinence*, each a vice that comes from pursuing the objects of the concupiscible power. The fundamental difference between the two vices is that the intemperate person embraces his appetites, whereas the incontinent person succumbs only for a moment:

in the intemperate person, the will is inclined to sin from its own choice, which arises from a disposition acquired through habituation; in the incontinent person, the will is inclined to sin by some passion, . . . [which] passes quickly (2a2ae 156.3c).¹⁰

Each person acts voluntarily, which for Aquinas entails that each one chooses his actions, through the will (§8.2). But in a sense the incontinent person does not do what he wants to do. He does what he wants *at that moment*, but he does not do what he would want on reflection. "Someone incontinent about concupiscence acts against that which he had once resolved, but not against that which he now wills" (1a2ae 6.7 ad 2).¹¹ The intemperate person, in contrast, is doing exactly what he wants. He has an entrenched disposition to choose things that satisfy his sensual desires, and so he simply lives his profligate life, unapologetic. From a moral perspective, the intemperate person is much worse (2a2ae 156.3c).

The case of intemperance raises interesting questions. Aquinas says that an intemperate person is difficult to reform, because his mistakes are too fundamental to be easily corrected (2a2ae 156.3 ad 2). He goes wrong in his judgments about ultimate ends, which is to say that he fails to grasp basic principles of practical reasoning. But how does this happen? Aquinas believes that human beings have a natural disposition, *synderesis*, through which we understand basic moral principles. In the Treatise he writes that *synderesis* "is said to incite us toward the good, and to scold us about the bad, inasmuch as through first principles we come to discover things and to make judgments about those discoveries" (79.12c).¹² The intemperate person seems to have somehow lost the disposition of *synderesis*, or at least to have driven it into hiding. In fact, it must be the latter, because Aquinas expressly holds that *synderesis* is never extinguished. Even the intemperate person who habitually pursues sensory pleasure still knows that what he is doing is wrong. "His reason is weighed down by the disposition of vice, so that in choosing he does not apply his universal judgment to the particular situation" (*QDV* 16.3 ad 3). To understand the intemperate

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person, we would need to understand how this universal knowledge got misplaced, and how his wrongheaded disposition ever took root.

The case of incontinence raises equally interesting questions. Aquinas holds that the will of an incontinent person “is inclined to sin by some passion” (as above). This raises the question of how exactly the passions act on the will. Sometimes Aquinas seems flatly to rule out the possibility of the lower appetites acting on the will. In the *De veritate*, for example, he writes, “the will does not take anything from lower appetite, but rather moves it” (26.6 sc 2). Yet in the 22ae he describes the will as “halfway between reason and concupiscence, and able to be moved by each” (155.3 ad 2). This last image is in many respects misleading. Aquinas considers this issue squarely in 1a2ae 77.1, where he asks, “Is the will moved by the passion of sensory appetite?” His answer is that the passions do move the will, but only indirectly, in two ways. First, the passions simply distract the will from its own operations. When one power of the soul is intently focused, the rest are distracted. Second, the passions “impede the judgment and apprehension of reason,” and this in turn affects the will, which “by nature always follows the judgment of reason” (1a2ae 77.1c). So the immediate internal causes of sin (and of wrong action more generally) are will and reason; the passions are a remote cause (1a2ae 75.2c). I return to these issues in §8.4.

Incontinence raises the further question of how it is possible for agents to act intentionally against what they know (or even believe) to be right. This is the phenomenon that recent philosophers refer to as weakness of will. Since I want to withhold judgment, for a moment, about what role the will plays in such cases, I speak for now of *acting against reason*. Aquinas knows, through Aristotle, that Socrates had simply denied the possibility of acting against reason (*Protagoras* 352–57). Aquinas thinks he can deal quickly with this position, remarking in the *De malo* that “it clearly runs contrary to what we experience everyday” (3.9c; Aristotle says much the same at *EN* VII 2, 1145b28). In a parallel discussion from the 1a2ae, written at around the same time, Aquinas offers a more charitable and illuminating reply. Socrates was partly right, Aquinas says,

For since the will concerns the good or the apparent good, the will is never moved toward the bad unless that which is not good somehow appears good to reason. Therefore the will never tends toward the bad, unless there is some ignorance or error of reason (77.2c).

Wrong actions must go not only through will, but also through reason. In a sense, then, one never does act against reason. All wrong action involves some ignorance or mistake on reason’s part. So Socrates was partly right. But Aquinas still wants to credit the clear evidence of experience, which indicates that people constantly do act against reason. So he adds that Socrates “did not entirely hold the truth; distinctions must be made” (1a2ae 77.2c).

Erratum – Peccatum

Aquinas thinks that Socrates was basically right in making the implausible-sounding suggestion that all moral failings are a matter of ignorance. “Where there is no failure in apprehending and comparing, there can be no willing of evil” (*QDV* 22.6c). Aquinas regards this as a conceptual truth, immune to revision on the basis of experience. Its truth follows from his conception of the will as a power that necessarily aims at what is presented to it as good.

For since the will is of itself ordered to the good as to its proper object, it *cannot* happen that it tend to the bad except as a result of something bad’s being apprehended as something good, which is a failure of intellect or reason (*QDM* 16.5c; see *QDV* 24.8c).

On its face, this suggests a thoroughgoing intellectualism that leaves little room for the will to play a role in ethics. As we will see, this is far from the truth. But Aquinas’s thirteenth-century readers often took his remarks on their face and criticized this doctrine because it left no room for attributing sin to the will. Even one of Aquinas’s defenders, the English Dominican friar William Hothum, argued in a quodlibetal question from 1280 that one sins “not always because of an error of reason . . . but because of the will’s liberty, by which it sometimes sins out of malice” (Lottin 1957, vol. I, p. 291n). Aquinas, as we will see, agrees that the will can sin out of malice. But even then, he contends, there must always be an accompanying failure of reason.

At this point Aquinas follows Aristotle in distinguishing between universal and particular knowledge, and between actual, occurrent knowledge and mere dispositional knowledge. Acting against reason may be the product of one’s having the universal knowledge that a certain sort of action is wrong, but lacking the particular knowledge that this action (which in fact is of that sort) is wrong. Or it may come from one’s having both universal and particular knowledge, but not having them actually in one’s mind at the moment. In either case, there will be rival practical syllogisms:

C1. No sin should be done.

C2. This is a sin.

C3. This should not be done.

I1. Every pleasure should be pursued.

I2. This is a pleasure.

I3. This should be pursued.

In the *De malo*, Aquinas remarks that both the continent and the incontinent make use of a syllogism with four propositions. The continent person, who struggles and wins against the unruly appetites of concupiscence,

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accepts both C₁ and I₁, “but because the judgment of reason wins out in him, he takes up the first [C₁] and reaches his conclusion from it” (*QDM* 3.9 ad 7). The incontinent person likewise accepts C₁ and I₁, but in his case the passions win out, and he completes his reasoning with I₂ and I₃. (This fits the first of the above cases, where one has actual universal knowledge, but no particular knowledge of what should be done.)

Most commentators on Aquinas have assumed that incontinence and acting against reason can simply be identified. The assumption is understandable, since we now treat incontinence as another name for weakness of will, and since *incontinentia* is the medieval translation for *akrasia*, which was Aristotle’s term for what we now think of as weakness of will. Still, that assumption is clearly wrong, for two reasons. First, Aquinas holds that incontinence (like intemperance), extends only to the excessive pursuit of sensory pleasure. Its objects are only those things desired by the concupiscible power; strictly, its objects are food, drink, and sex (2a2ae 141.3–4, 155.2). So incontinence is at most one limited form of acting against reason. Cases where we are loyal beyond reason, courageous beyond reason, or greedy beyond reason would not count as incontinence, on Aquinas’s usage.¹³

There is a second and more interesting reason why incontinence cannot be identified with acting against reason. Incontinence is the most blatant and hence paradoxical form of acting against reason. But, as we saw above, the intemperate agent also knows that what he is doing is wrong. Incontinence is a passing event, quickly regretted, whereas intemperance is deeply entrenched (2a2ae 156.3 ad 1). The intemperate person is not swayed by passion, but chooses the side of the passions, without regret. This makes it harder to see that intemperance is actually a form of acting against reason. But Aquinas’s conception of synderesis ensures that it belongs under that heading. Aquinas believes that each of us holds within us, in virtue of synderesis, the natural law of morality. This natural law can be obscured in particular cases, but never universally.

With respect to common principles, the natural law, in the universal, can in no way be abolished from the human heart. But it is abolished in the case of particular courses of action, because of concupiscence or some other passion (1a2ae 94.6c).

It is, of course, not only the incontinent who loses the natural law in particular cases. The intemperate agent likewise fails to see the wrongness of his action. Aquinas describes the intemperate agent as failing to grasp the major premise (C₁); “as a result, he follows his concupiscent desires unrestrainedly” (2a2ae 156.3 ad 1). Still, he retains a dispositional knowledge of the major premise, and so in some sense knows that what he is doing is wrong, in a way perfectly analogous to how the incontinent agent retains the dispositional knowledge that he has reached the wrong conclusion. “The fornicator knows, in the universal, that his fornication is bad, but when he consents to fornication, he assesses that it is good for him to do it now” (*QDV* 24.10c; see *QDV* 24.2c). Aquinas admits that in rare cases

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a person may be ignorant about even such basic moral principles. But his theory of synderesis commits him to the view that immorality standardly involves acting against reason.¹⁴

One's view of these matters will be distorted if one focuses on the *Ethics* commentary. There Aquinas makes no mention of synderesis or the natural law, and he follows Aristotle in distinguishing *akratic* actions as those that are not chosen (see note 11). *ST* is a much better guide to Aquinas's own views. In the 12ae he distinguishes three internal causes of sin (and see *QDM Q3*):

Q76. Ignorance (due to reason)

Q77. Passion (due to sensory appetite)

Q78. Malice (due to will).

Only in the first case does one not know that the action one does is wrong (78.1 ad 1); in each of last two cases one acts against reason. Commentators have focused on the second case, on cases where reason is overcome by passion against its knowledge (77.2). But it is wrong to equate this with incontinence, since incontinence is just one form of being overcome by passion. (Accordingly, Aquinas barely mentions incontinence in 12ae Q77, reserving discussion of it until 22ae QQ155–56.¹⁵) It is also wrong to equate Q77 with acting against reason, because someone who acts from malice also acts against reason. Such a person “knowingly chooses the bad” (12ae 78.1c), but does so because of some dispositional tendency to find another, lesser good more desirable. One species of malice is intemperance. But again, intemperance is just one species of a more general phenomenon (intemperance is the subject of 22ae QQ141–70). So the class of incontinent actions is just a very small subset of those actions that are done against reason. Scholars writing about “incontinence” in Aquinas have generally ignored these facts, focusing either on the *Ethics* commentary or on texts that barely mention incontinence, while saying little or nothing about those articles where incontinence actually is the topic.¹⁶

Another telling context where Aquinas's view comes out is his commentary on Romans 7, where Paul gives a famous account of his struggle against sin: *For this good that I will, I do not do; but that evil that I hate, I do* (see 83.1 obj. 1). The natural reading of these lines takes Paul to be describing weakness of will, and although Aquinas believes that this is not the best interpretation of the text, he nevertheless explains how that reading should go. If Paul is speaking for the sinner, then he is describing someone

who understands in the universal that sin should not be done, but who does it when conquered by (i) the suggestion of a demon, (ii) passion, or (iii) the inclination of a bad disposition. And so he is said to do what he understands should not be done, acting against conscience (*InRom* VII.3.563; see also 565–66).

This sinner knows not only the abstract and virtually trivial truth that sin should not be done; he further knows that he should not be doing what he

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is doing. He acts "against conscience." One possibility is that he has been overcome by passion, in which case the sinner would most likely suffer from incontinence (assuming the passion stems from concupiscence). But another possibility is that he has a long-term disposition to act in this way, in which case he would probably be intemperate.¹⁷

For Aquinas, a large part of immorality is a result of failing to act on what we know "in our hearts" we should do. From this Christian perspective, Aquinas dramatically rethinks the Aristotelian notion of *akrasia*. Acting against reason becomes a more general phenomenon of which incontinence is just a special case. It is not only the incontinent who act against reason, nor is it only those who are overcome by passion. Even the intemperate act against reason, despite the fact that in Aristotle the intemperate are contrasted with the akratic. Once one begins to think of incontinence as just a special case, one can apply the general analysis of acting against reason to a wider range of phenomena. Immoral action, from this perspective, begins to take on a unified character. The incontinent agent, swept away by his passions, knows that he should have done otherwise, and immediately regrets his choice. But even the corrupted, cynical, intemperate agent knows, at some level, that what he does is wrong. And in between these two extremes lies a range of cases that are, in some ways, even more interesting. Augustine prayed, as a boy, "Grant me chastity and continence, but not yet" (*Confessions* VIII.vii.17). This shows neither the regret of the incontinent, nor the complacency of the intemperate, but falls somewhere in between, into an interesting middle ground that for Aquinas also counts as acting against reason.

In the end, even though Aquinas accepts the Socratic view that wrongdoing always involves some kind of ignorance or error of reason, his position nevertheless turns out to be virtually the opposite of Socrates's. Whereas Socrates holds that it is impossible to act against reason, and difficult if not impossible to acquire moral knowledge, Aquinas holds that the fundamental principles of morality are known universally, and that therefore acting against reason is one of the most common of moral failings.

How exactly does this failing occur? The picture of acting against reason presented so far suggests that it is essentially a battle between reason and passion, where "each contestant is armed with his argument or principle" (Davidson 1980, p. 35). In the intemperate person the passions have the upper hand, inasmuch as reason itself has become habituated to follow the lead of the passions. In the incontinent person the battle remains unsettled, reason continues to resist. Viewed in this way, 'weakness of will' would seem to be a misnomer. What a virtuous person needs, it would seem, is not a strong will, but the intellectual capacity to see the passions for what they are, and to resist them calmly and rationally.

If all this is right, what are we to make of Aquinas's contention that the virtue of continence resides in the will? In 222ae 155.3 he argues that the

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difference between the continent and the incontinent person can lie nowhere else. The difference is not in the concupiscible power, because even the continent person has excessive appetites (sc). The difference is not in reason, either, because "both the continent and the incontinent have right reason, and each, when outside of passion, heeds the proposition that illicit desires are not to be followed" (c). So the continent must differ from the incontinent with respect to their wills. "Although the passions do not have the will as their subject, it is still within the will's power to resist them" (ad 3). Despite the rationalism that Aquinas's account often suggests, it turns out that 'weakness of will' is entirely appropriate, at least as a label for incontinence.

But how exactly does the will fit into Aquinas's account? Aquinas does not give a perfectly clear answer, perhaps because there are a variety of ways in which the will may be at fault in incontinent action. One kind of incontinence is what Aquinas calls *impetuosity*; in this case the soul gives in to the passions immediately, before reasoning (2a2ae 156.1c). Although Aquinas does not say so, it is not hard to see that this must be the fault of the will: the passions cannot bring about action without the will's approval (81.3c; see §8.4). Even in such cases, the passions must work through reason, since they cannot affect the will directly. But the point is presumably that there is no deliberation, nor even any reflection on whether deliberation is appropriate. This is the fault of the will, which controls whether or not reason deliberates (1a2ae 10.2c; §7.4.3).¹⁸

Another, more typical sort of incontinence is *weakness*; this occurs when one fails to adhere to one's prior judgments (2a2ae 156.1c). Cases of this sort seem particularly difficult, at first glance, to fit under the heading *weakness of will*, because here the fault seems to lie squarely with reason. Aquinas holds that "the ignorance of the incontinent person concerns some particular object of choice" (2a2ae 156.3 ad 1). In terms of the warring syllogisms described earlier, the incontinent person knows the major premise from each syllogism,

C1. No sin should be done;

I1. Every pleasure should be pursued,

but fails to reach the proper conclusion:

C3. This should not be done.

Aquinas is not very clear about exactly why the agent fails to grasp C3. Perhaps he fails to grasp

C2. This is a sin,

or perhaps he somehow fails to see that C1 and C2 entail C3. Walter Burley (1275–1346) argued for the second possibility. Regarding the example,

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B1. Nothing sweet should be tasted;

B2. This is sweet;

B3. This should not be tasted.

Burley sensibly remarks that the incontinent agent could not be mistaken about the minor premise: “he knows well enough that this is sweet.” He suggests instead that the agent might fail to see that B1 and B2 entail B3.¹⁹ But it is hard to see how that option is any more plausible.

Once we locate the cause of incontinence in the will, we can conclude that reason is not doing anything wrong. The incontinent agent does not somehow misunderstand the syllogism that he should be following, but simply fails to consider that syllogism at all – the will “overlooks the good that universal reason upholds” (*QDV* 22.9 ad 6). The incontinent agent knows C1, that *No sin should be done*, but the question of whether the action is a sin is not on the agent’s mind. The agent is conceiving of the action as a pleasure, and so the I-syllogism takes effect in his mind and he acts in a way that makes sense at the time. Later he sees that he should have viewed the action differently, but at that moment his choice seemed right. In his *De anima* commentary, Aquinas follows Aristotle in describing the incontinent agent as someone who acts for the sake of immediate pleasure, ignoring the future ramifications: “For that which is enjoyable in the present seems to be enjoyable and good without qualification, because the future is *not being considered*” (III.15.165–67).

By conceiving of incontinence in this way, Aquinas can make the will responsible for the wrong choice. It is the will that is responsible for directing reason: “the will wills the intellect’s cognizing” (82.4 ad 1; see §7.4.3). The incontinent agent fails to focus on the sinful nature of the action he is considering, and instead focuses on its pleasant nature. There is no intellectual heavy-lifting here, no complicated reasoning to work through. The agent’s failure is a failure of will. “It is within the will’s power to direct or not direct attention to a thing” (*QDM* 3.10c). The incontinent agent is one who consistently fails to resist his sensual desires, not because he is ignorant, but because he lacks the proper willpower, which is simply to say that he lacks the appropriate disposition within will – the disposition of continence – which would have held his mind’s focus steadfast on the negative implications of his action.

Much the same can be said for agents that are tempted by passions of all kinds, and for agents that act out of malice. Aquinas describes malice as the fault of will: “the will is disordered when it loves more what is less good” (1a2ae 78.1c). The intemperate agent loves sensual pleasures more than he loves obeying the will of God – not out of ignorance, but out of a failure to desire what he knows he should desire more. Again, this is a failure on the will’s part, a failure of focusing on what is really important, a failure of possessing the proper sort of disposition. Generally, ‘weakness of will’ turns out to be an apt label for acting against reason.

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Here Aquinas seems more Augustinian than Aristotelian. Augustine describes how “my two wills, one old, the other new, one carnal, the other spiritual, clashed with one another” (*Confessions* VIII.v.10), but what this turns out to mean is that his mind was on one hand “lifted up by the truth,” on the other hand “weighed down by habit” (VIII.ix.21). Aquinas can offer a systematic account of how the will’s habits stand in the way of what one firmly believes should be done. But Aquinas resists the Augustinian suggestion that he never could have overcome his weakness on his own.²⁰ Augustine, in giving all the credit to God, implies that we are helpless in the face of our weakness. This is quite alien to Aquinas’s approach:

When someone is disposed through a disposition or passion so that something seems to him either good or bad in this particular [instance], the will is not moved of necessity. For one could have removed this state so that it would not seem so to him . . . – although a passion is more easily removed than a disposition (*QDM* 6c).

Such freedom is not a mere theoretical possibility, but neither is it easily taken advantage of. A disposition does not necessitate, because one “could have” removed it, if one had been more vigilant in the past. Likewise, one could begin now to remove the disposition, but results might be slow in coming. Strength of will is a disposition that must be developed over time, and which can be developed only by people with enough intelligence and perseverance to stay on the right path. Hence right action takes a certain measure of wisdom:

The will is inclined in a certain way by its body, but not necessarily, because it can resist. . . . But only the wise resist their bodily inclinations, and they are few compared to the foolish, for *there is no end to the number of fools* (*QDV* 22.9 ad 2).

One goal of the study of theology, for Aquinas, is to become wise in just this way. But, as Aquinas likes to say, it is often easier to begin with what is better known to us. So rather than take on the subject of wisdom, I turn now to consider the foolish and their passions.

8.4. How the passions tempt us

Weakness of will, as described in §8.3, seems to be a matter of temporary forgetfulness, of losing sight of the broader implications of one’s actions. On its face, such an account does not seem very plausible. Temptation seems to do its work not by distracting us, but by sweeping us off our feet. But there are several immediate reasons why Aquinas cannot accept the sweeping-us-off-our-feet model. First, as discussed in §8.2, all genuinely voluntary actions are chosen. As a result, the passions must produce their effects through reason and will. Second, the passions cannot act directly on any part of the mind, because the corporeal is inca-

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pable of acting on the incorporeal (84.6c). The passions must do their work indirectly.

If Aquinas's account is to succeed, he must make a compelling case for the kind of effect he says the passions have on the mind. In 1a2ae 9.2 he offers an example of the process:

When a human being is in the grip of some passion, something seems agreeable to him that does not seem agreeable when he is outside the grip of passion – for example, what seems good to someone angry does not seem good to someone calm.

Later in the 1a2ae, he considers the precise mechanisms at work. There are two indirect ways in which the passions have an effect on the will. First, the passions distract the will from its own operations. "A certain attention is required for the soul's functions; when this is forcefully directed at one thing, it cannot forcefully attend to another" (1a2ae 77.1c; see 1a 76.3c). In this way the passions literally do just distract us from thinking clearly and putting matters into the proper perspective. A television in the next room might have the same effect.

The second and more interesting way in which the passions have an effect on mind is by impeding the operation of reason. Because they are corporeal, they do so not directly but only insofar as they influence two crucial internal senses: imagination and the estimative (or cogitative) power.

It is clear that the apprehension of imagination and the judgment of the estimative power follow the passion of sensory appetite – just as the judgment of taste follows the condition of the tongue (1a2ae 77.1c).

Although the passions do not affect the mind directly, they are able to exercise considerable indirect influence through their effect on these internal senses. Because the two internal sensory powers have physical organs, there is nothing puzzling about this kind of influence. Moreover, we experience that this regularly happens, at least in the case of imagination: "we see that human beings in the grip of some passion do not easily turn their imagination from the things they are being affected by" (1a2ae 77.1c). In affecting the imagination, the passions affect the kinds of images we have in our head. Once we see the central role that such images play in the cognitive process (in §9.3), it will be easy to see how this might lead the mind to go badly astray in its actions. For now I want to focus on the other internal sense that Aquinas calls attention to, the estimative or cogitative power. A brief excursion into the nature of this power will clarify how the passions affect our mind.

In nonrational animals, the estimative power is what triggers instinctive reactions of pursuit or flight (see §9.1). This is the power that allows sheep to recognize wolves and wolves to recognize sheep. It does not give animals the conceptual categories of *sheep* or *wolf*, but it nevertheless makes them responsive to certain sensory patterns: the smells-like-a-wolf pattern, or the looks-like-a-sheep pattern. In place of this estimative power, human

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beings have a cogitative power. This power is presumably responsible for our fear of snakes, rats, and spiders, and in general for the instinctive attitudes that we, like all animals, have. But the cogitative power does more – so much more that it deserves a different name. Although it is a sensory power, it merits the title of reason, “particular reason,” because it engages in the same sort of comparison and inference that genuine, “universal reason” engages in. So whereas other animals work “only by a kind of natural impulse,” human beings make “a kind of comparison” (78.4c). It is at this level of sensory processing that we identify individual objects as individual objects; through the cogitative power, “when I see something colored I perceive this human being or this animal” (*InDA* II.13.192; see §9.2). Further, the cogitative power is capable of associating distinct particular forms: it “compares individual intentions” (81.3c), which is to say that it is capable of putting the notion of *man* together with the notion of *my father*, thereby reaching some sort of grasp of the fact that *This man is my father*.²¹

The cogitative power is an obscure but fascinating part of Aquinas’s cognitive theory. One might well wonder how a part of the brain (“the middle part of the head” (78.4c)) manages to perform some of the tasks of reason. Doesn’t this clash with the argument from 75.2 (§2.2) showing that the intellect must be an incorporeal power? Aquinas speaks of “a kind of affinity and closeness to universal reason, in virtue of a kind of overflow [*refluentiam*]” (78.4c). Elsewhere he writes that “the sensory power, at its highest level, shares [*participat*] something of the intellectual power in a human being, in whom sense is connected to intellect” (*InDA* II.13.199–201). All of this looks rather obscure. But in fact Aquinas sees less to explain than one might suppose, because he does not believe that reasoning requires immateriality. What requires immateriality, as we see in §10.4, is the capacity to form universal concepts. This is precisely what the cogitative power cannot do. It “compares individual conceptions just as intellectual reason compares universal conceptions” (78.4c). It does classify and compare in a certain way – “It cognizes this human being as it is this human being, and this piece of wood as it is this piece of wood” (*InDA* II.13.209–10) – and this requires that it somehow possess the appropriate categories (*human being, wood*). This is presumably what Aquinas means when he talks about the “overflow” and “participation” from intellect to the cogitative power. Intellect must supply the cogitative power with this conceptual framework. But the framework is not truly conceptual, inasmuch as the cogitative power makes only particular judgments. It lies at the boundary of sense and intellect, capable of intellect’s rational comparisons and contrasts, but incapable of intellect’s universality.

What is the point of this cogitative power? Why do we need the capacity to reason at the sensory level? Perhaps the cogitative power’s most important role comes in practical reasoning. As we will see again in §10.3, Aquinas is committed to a controversial and implausible-looking thesis about intellect: “Our intellect cannot directly and primarily cognize sin-

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gulars in material things” (86.1). This raises a variety of difficulties, none more serious than the following objection: “Practical intellect directs action. But acts concern singulars. Therefore it has cognition of singulars” (86.1 obj. 2).

Aquinas replies by appealing to the role of the cogitative power:

The choice of a particular course of action serves as the conclusion of a syllogism of practical intellect. . . . But something singular can be the direct conclusion of a universal proposition only on the mediating assumption of some singular proposition. So the universal reason of practical intellect can produce movement only through the mediation of a particular apprehension belonging to the sensory part (86.1 ad 2).

In other words, practical deliberation can lead to choice and then action only if the senses supply the information about particulars. Here Aquinas has in mind a practical syllogism that has an action as its conclusion. The major universal premise is supplied by intellect, *No sin should be done*; whereas the minor is supplied by the cogitative power: *This is a sin*.

The conclusion, the action, follows from the combined efforts of intellect and the cogitative power. The intellect, considered alone, has a kind of blind spot as regards particulars, and this reveals itself most clearly in action: “universal opinion produces movement only when mediated by particular opinion” (80.2 ad 3; see *QDV* 10.5c, *InDA* III.16.123–45, 2a2ae 49.2 ad 1.).

This is just one of a number of contexts in which we will see Aquinas stress the unified, cooperative character of the soul’s various capacities. Individual powers rarely work in isolation; the familiar operations that we call perception, thought, and choice all rest on a complexly interconnected sequence of operations. The human body cannot exist without the soul (§3.2), but the soul is likewise incapable of normal operations without the body (see §§12.2 and 12.3), and the soul’s various capacities are entirely dependent on one another. Here this is so for practical reasoning and decision; in the next chapter we will see the extent to which both sensation and thought are cooperative enterprises.

Sense and intellect work together on practical reasoning in an apparently seamless fashion, but with a clear division of labor. Only the senses apprehend material particulars; only the intellect apprehends universals. This division raises a worrisome problem: how does one event in the intellect and another event in the cogitative power result in a third event, a choice, in the will? One can see, as a matter of logic, how the major premise and the minor premise justify the conclusion. But the mechanisms of the actual process are obscure. The will is a rational appetite, limited to choosing what the intellect judges to be good. But Aquinas grants that “appetite is a movement from the soul toward things, which are singulars” (80.2 obj. 2). How then does it help to introduce a special sensory capacity to grasp particulars? The problem goes beyond practical reasoning; it extends even to theoretical judgments of the form *Socrates is a human being* (86.1 obj. 1).

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Obviously, the mind has thoughts of this kind. Moreover, thoughts of this kind require not just an acquaintance with individuals, but also a grasp of time.

Every composition and division has some time attached to it, either present, past, or future. But the intellect abstracts from time, as it also does from other particular conditions (85.5 obj. 2; see *SCG* II.96.1820).

By stating that Socrates *is* a human being, I am making a claim about what is now the case, about Socrates here and now. Aquinas postulates the cogitative power to grasp such information. But if the information cannot get into intellect, then the information might as well be in someone else's head. (This is another version of the binding problem in §6.4.)

Aquinas's way around this problem is to allow that the intellect *can* apprehend singulars in a certain way.

Just as it was said earlier that we would be unable to sense the difference between white and sweet if there were no common sensory power that had cognition of both, so we would also be unable to cognize the relationship of the universal to the individual if there were not one power that had cognition of both. Therefore the intellect has cognition of both, but in different ways (*InDA* III.8.175–182).

Aquinas accepts that it is not enough for the cogitative power to understand particulars; there must be “one power” that grasps both universal and individual. At this point he postulates a way in which the intellect can apprehend individuals: “indirectly, through a kind of quasi-reflection” (86.1c). Whatever the details of this rather obscure process,²² the cogitative power remains an essential tool. It is what directly apprehends particulars, and it “prepares phantasms” for the intellect (*SCG* II.73.1503; see 1a2ae 50.4 ad 3). These judgments about particulars are taken up, indirectly, by the intellect.

A particular demonstration comes to an end in the senses, because its conclusion is a particular, which is *directly* cognized through the senses, while *through a kind of application or reflection*, a demonstrative argument all the way to the particulars is produced (*InPA* I.38.178–82 [339]).

The intellect's capacity for reflection does not make the cogitative power superfluous – no more than, in general, the presence of an intellect makes the senses superfluous. Without the cogitative power, there would be no particular judgments to reflect on.

Thus the cogitative power plays a crucial role in human reasoning, especially practical reasoning. Any distortions to the cogitative power can easily affect the choices one makes. No wonder the passions have such a potent effect on those choices:

The acts and choices of human beings concern singular things. So because sensory appetite is a particular power, it has a great capacity to make a person disposed in such a way that, with regard to singulars, matters appear to him one way or another (1a2ae 9.2 ad 2).

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This is the most basic cause of sin, and indeed of all wrong action:

Sin occurs in one's actions when an opinion about particular things to be done is corrupted on account of some pleasure or some other passion, although still that passion does not corrupt the universal opinion (*InDA* III.16.141–45).

This is acting against reason in its classic form, the form of incontinent action triggered by unbridled passion. In such cases the passions have an effect by working through the internal senses of imagination and the cogitative power. By this means the passions indirectly corrupt the intellect's judgments and spoil the will's choices.

8.5. A politic rule

We have now seen why Aquinas is concerned about controlling the passions. In 81.3 (“Do the irascible and concupiscible parts obey reason?”) he delivers some news that is bad but hardly surprising, that our control over the passions is limited. The mind is not absolutely in charge: in Aristotle's phrase, the mind's control is a politic one (*Politics* I 5, 1254b2–6), in that the sensory appetites can resist (ad 2). This gives the passions a curious in-between status. Although they involve bodily changes, the passions are unlike the body's limbs. We move our limbs at will: they “can in no respect resist the soul's commands” (ad 2). The passions do resist. Still, they are not as far out of control as the five external senses are. “The sensory part of the soul does not obey reason: for we do not hear or see when we want to” (obj. 3). But although we cannot make ourselves see what is not in front of us, we can sometimes make ourselves desire things we are not presently desiring.

It is the very materiality of the sensory appetites that explains, most fundamentally, why we cannot entirely control them. “Every act of a power using a corporeal organ depends not only on the capacity of the soul but also on the disposition of the corporeal organ” (1a2ae 17.7c). Such bodily dispositions affect the nature of our appetites. Recasting an often-quoted phrase from the *Nicomachean Ethics* (III 5, 1114a32), Aquinas writes, “of whatever sort anyone is with respect to bodily quality, so the end seems to him: for it is from a state of this sort that a human being is inclined to choose or reject a thing” (83.1 ad 5). Of course, such factors do not excuse one who yields to such temptation. Aquinas hastens to add that “these inclinations are subject to rational judgment, which lower appetite obeys,” and he refers back to 81.3.

Aquinas offers two explanations in 81.3 for how the mind controls the sensory appetites. First, it does so through reason, via the cogitative power. Just as the estimative power in other animals stimulates fear and desire, so does the human cogitative power. You see a spider, and you become afraid. I see someone I should have telephoned, and I become embarrassed. It is the cogitative power that explains our ability to perceive individual objects (§§8.4 and 9.1), and since our emotional reactions are often triggered by

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perceiving such individuals, the cogitative power exercises considerable influence. Yet the mind has control over the cogitative power: the process of particular reasoning can be directed by universal reason. You see a spider and you begin to be afraid, but you then go on (through particular reason, directed by the mind) to notice that it is a small spider, one that does not appear threatening, one that you could step on. In this way you bring your passions under control. "This is something anyone can experience for himself: for by adducing certain universal considerations, one calms (or else incites) one's anger, fear, etc." (81.3c). We can persuade ourselves that there is nothing to be afraid of.

A second way that the mind controls the passions is through the will. Even if the sensory appetites get out of control, they still cannot produce any action unless the will consents: "a human being is not immediately moved by the appetite of the irascible and concupiscible powers, but waits for the will's command" (81.3c). Elsewhere Aquinas allows that there are rare exceptions to this claim. Some people become so inflamed by passion that they entirely lose control of their actions: "For such people the same account holds as for brute animals" (1a2ae 10.3c). But these are highly unusual cases, and take us out of the realm of voluntary action. For the standard case, where we voluntarily act under the influence of passion, the passion alone cannot lead to action; the will must acquiesce.

Despite these two means of control, the sensory appetites do not always obey, inasmuch as they are moved by factors outside of our control.

Sensory appetite is naturally moved not only by the estimative power (in other animals) and by the cogitative power (in humans), directed by universal reason, but also by the imaginative power and by sense. Thus we experience that the irascible and concupiscible clash with reason, because we sense or imagine something pleasant that reason forbids, or something unpleasant that reason demands (81.3 ad 2).

The problem, in effect, is that the mind does not completely control the inputs to sensory appetite. Although the mind governs the cogitative power, this is just one source of stimulation. The sensory appetites are also moved by the things we perceive and imagine. Since the mind cannot control what we perceive, it cannot entirely control the sensory appetites.

Imagination is a less clear-cut case. On one hand, the imagination provides a third means through which the mind controls the sensory appetites. Since the imagination's content is not determined by external sensible things, it is to some extent under the mind's control. The mind "can form the phantasms of the imaginative power" (81.3 ad 3), and therefore the mind controls this avenue of stimulation. (Elsewhere Aquinas gives greater prominence to imagination as a means of control over sensory appetite: see *QDV* 25.4c, 1a2ae 17.7c.) But such control, in practice, is fallible, because we are not completely in charge of the images that pass over us. Images come unbidden, and we see and hear things we would rather not. "Some-

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times the movement of sensory appetite is suddenly aroused by the apprehension of imagination or sense, and then that movement is beyond the command of reason" (1a2ae 17.7c).

In all, the conclusion of 81.3 is misleadingly optimistic. "The irascible and the concupiscible are subject to reason," Aquinas tells us, but the downside is that these appetites can never completely be controlled. For Aquinas, "sensuality in this life can be cured only through a miracle" (*QDV* 25.7c). This is one consequence of original sin; Adam and Eve were completely in control of their appetites, but since they were cast out of Eden, human beings have had to reckon with the *fomes* of sin, the unquenchable spark of concupiscence that can be controlled in any particular case, but never in all cases. It is easy to read the following remarks as autobiographical:

The corruption of the *fomes* does not stop a human being from being able to suppress individual excessive movements of sensuality, through rational will, if one foresees them. One can, for instance, turn one's thoughts to other things. But when one turns one's thoughts to other things, an excessive motion can swell up even with respect to that. For instance, when someone who wants to avoid the motions of concupiscence redirects his thoughts away from the pleasures of the flesh,

Original sin

Original sin is a philosophically fascinating topic. Adam and Eve, in their initial state of innocence, had knowledge of all things (94.3); they could not be deceived (94.4); their passions were entirely subject to reason (95.2); they possessed all the virtues (95.3); they were immortal (97.1). Given all these perfections, there are obvious questions about how they ever could have sinned. But sin they did, and so these perfections were taken away. The punishment for that original sin has been passed down through the generations, something we experience daily in our continual ignorance and susceptibility to passion.

Does this mean that human beings are, by nature, wise and good, but burdened by an age-old divine curse? No. Aquinas's view is that God initially gave the human race a special gift, "original justice," which accounts for the prodigious knowledge and virtue of Adam and Eve (100.1, 1a2ae 85.3, *QDV* 25.7). When they sinned this gift was taken away and human beings fell to their natural, mediocre state. By nature we are fallible, weak, and corruptible, and this is how God has decided to leave us. But of course we have not been utterly forgotten; God did not turn his back on us forever. Christians look to the Gospel for the story of our redemption.

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toward scientific inquiry, then sometimes what swells up is an unexpected motion concerning vain glory. So a human being, because of the above corruption, cannot avoid *all* such motions (1a2ae 74.3 ad 2).

One tries to avoid lust by thinking about one's work, and one succeeds, only to find oneself meditating on the honor and fame that one's current projects will bring. Sounds familiar.

Despite his pessimism (or realism) regarding the influence of non-rational appetite, Aquinas needs to insist that human beings are generally capable of resisting any one particular desire. If we could not resist, the action in question would no longer be voluntary and hence no longer our responsibility. So he concludes the previous passage with the remark, "a human being . . . cannot avoid *all* such motions. But all that is required for it to have the character of a voluntary sin is that one be capable of avoiding *individual* ones."²³ Yet how are we to conquer our wayward passions? What sort of wisdom is needed to overcome weakness of will?

The strategies examined in §8.4 – using reason to control the passions through imagination and the cogitative power – are no doubt useful on occasion, but they seem like rather weak stuff in the face of entrenched passions and an enfeebled will. For the incontinent it is of marginal use to hear that the will can resist; 'can,' to the ears of the incontinent, will inevitably suggest a bare logical possibility. It is not even clear that Aquinas's advice is applicable to the incontinent. Aquinas speaks of controlling passions that have been foreseen (as in the first sentence of the passage just quoted), but the incontinent already suffer from excessive passions, and these passions are already distorting belief and decision. For the incontinent, it would seem, Aquinas's advice comes too late.

Aquinas does point to several ways in which the incontinent can be cured (2a2ae 156.3 ad 2). (Not surprisingly, in view of §8.3, he suggests the same remedy, in heavier doses, for the intemperate). For such people it is not enough simply to use reason more, because their reason is impeded by passion. One part of the cure is correction and admonishment from others. Through this one begins to resist one's passions, and the resistance itself weakens those passions. The second part of the cure is the interior gift of divine grace, so as to allay the passions. Again, this does not look encouraging from the perspective of the incontinent (or intemperate) agent. By bringing grace into the picture at this point, Aquinas moves in the direction of a more Augustinian account, on which our tendency to act against reason is a part of the human condition that only God can reliably cure.

Aquinas's broader thinking about grace confirms this perspective. Without grace, human beings inevitably stray from the good. Mistakes of reasoning about what should be done are unavoidable, as are the passions that distract reason even when it knows better. Grace provides us with the infused virtues through which "the lower powers are restrained, the will is

more strongly inclined toward God, and reason is perfected in its contemplation of the divine truth" (*QDV* 24.9c). Yet even so, sin is inevitable in this life, because even the wisest cannot make God the reason for all of their actions, and because "the lower powers cannot be so subject to reason as never to impede the act of reason" (*ibid.*). To avoid sin in this life, unswervingly, would require something beyond grace: it would require "the protection of divine providence, . . . so that whenever the occasion for sin arises, the mind is aroused to resist" (*ibid.*). In this life, in other words, the perfectly good person would need every possible protection, even against bad moral luck.²⁴

In heaven, matters will be different, because there a vision of the divine essence will so strengthen the human mind, both will and reason, that "the only motion that could swell up in the lower powers would be one in keeping with the rule of reason" (*QDV* 24.8c). One's new understanding of God, in that life, will be so profound that the passions will simply lack

"Every man will be his own physician"

The body of the resurrected will be perfectly under the control of the soul not only with respect to its passions, but also with respect to physical decay and corruption. The human soul, elevated by the divine vision, will rule so completely as to overcome the body's perishable nature. It is not that resurrected bodies are made out of different, imperishable material, nor that God miraculously preserves the bodies of the resurrected, nor that some kind of quintessence will be added to our bodies, making them imperishable (*IV SENT* 44.2.1.1c; see 97.1c). Instead, "a soul enjoying God will adhere to him with complete perfection, and will fully participate in his goodness, in its own way, *and therefore the body will be completely subject to the soul*" (*SCG* IV.86.4222). Aquinas in fact thinks that resurrected bodies will be immune not only to the forces of disease, passion, aging, and decay, but even to the forces of gravity. Just as the soul now binds the body together, despite the countervailing force of the elements, so the glorified soul will be able to lift our body above all other material things, up to the heavens (*SCG* IV.87).

All of this suggests nothing so much as the theology of Mary Baker Eddy, founder of the Church of Christ, Scientist. In *Science and Health with Key to the Scriptures*, the book whose authority for Christian Scientists is equal to that of the Bible, Eddy writes, "Health is not a condition of matter, but of Mind" (ch. 6, p. 120). Moreover, "When the Science of being is universally understood, every man will be his own physician, and Truth will be the universal panacea" (ch. 6, p. 144).

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all force. "A soul enjoying the divine vision, joined to its ultimate end, will discover that its desires are fulfilled in all respects" (*SCG* IV.86.4220). The blessed will be resurrected with their bodies (§12.4), but "the human body will be perfectly subjected to the rational soul" (IV *SENT* 44.2.1.1c).

Compared with the blessed in heaven, our bodies are out of control, influenced by reason but not completely subject to its control. Yet what sort of domination does Aquinas take to be desirable? What would it mean for the passions to be "perfectly subjected to the rational soul"? It can sometimes look as if Aquinas's ideal for human nature is a life entirely free of the passions, a life of reason alone, with the passions held firmly under foot. The inevitability of our passions often seems to take on the aspect of a curse, a flaw in our nature that more times than not will prove fatal.

Here, as in so much else, Aquinas is diametrically opposed to Hume, for whom, famously, reason is and ought to be the slave of the passions. It is of course Hume who has had the greater influence on recent philosophy; Aquinas's attack on the passions is likely to strike modern sensibilities as superficial and impoverished. Martha Nussbaum, one of the most distinguished proponents of this modern attitude to the emotions, likes to grade theories of the emotions according to how large a positive role they give to those emotions. At the bottom of the barrel are those theories on which the emotions are "bad and misleading because, when one is engaged with them, one cannot think deeply or clearly" (1990, p. 386). Nussbaum locates Plato here, with his view that appetite and desire are "potent forces of both distortion and distraction, and that clear and adequate judgments concerning value can be made only by getting the intellect free and clear of their influence altogether" (p. 248). More sophisticated theories, on the Nussbaum scale, take the emotions to be necessary for genuine belief: "if one *really* accepts or takes in a certain belief, one will experience the emotion" (p. 41). Best of all are those theories that give the emotions a central role in practical reasoning, that view the emotions "as intelligent parts of our ethical agency, responsive to the workings of deliberation and essential to its completion" (p. 41). She finds this account in Aristotle, for whom "the emotions are themselves modes of vision, or recognition. Their responses are part of what knowing, that is truly recognizing or acknowledging, *consists in*" (p. 79).

One expects to find Aquinas in the Aristotelian camp, but on Nussbaum's story he looks more at home among the Platonists. In actual fact, he belongs somewhere in the middle. Aquinas distinguishes two kinds of passions, those antecedent to the judgment of reason, and those consequent to judgment. Passions that come before judgment are viewed with Platonic distrust: "in this way it is necessary that anger and every such passion always impedes the judgment of reason, because the soul can judge the truth best in some tranquility of mind" (*QDM* 12.1c). Consequent passions, on the other hand, are admirable and valuable. They are admirable, because they are a sign that the mind is fully committed to its choice: "the will cannot be intensely moved toward something without some passion

being excited within sensory appetite" (1a2ae 77.6c). They are valuable, because they help one achieve one's aims (*QDV* 26.7c; see *QDM* 12.1c); this is clear especially for the passions of the irascible power, which fight for the things we want. Aquinas therefore rejects the view that the passions should always be shunned.

The pivotal issue is Aquinas's Platonic treatment of antecedent passions. Nussbaum contends that such passions can play a useful role in practical reasoning, that they help illuminate features of a situation that intellect alone would never grasp. Aquinas cannot see that anything good could come of such passions. But we should wonder, following Nussbaum, whether that might not be an unfair prejudice. We can grant Aquinas that the passions, by affecting the body, do sometimes distort the judgment of reason, through imagination and the cogitative power (§8.4). We can also grant that the passions are entirely appetitive in nature, and themselves have no cognitive content.²⁵ Still there seems room for the possibility that we can learn from such passions; that when we find ourselves moved, antecedent to judgment, we should attend to our emotions as quite possibly the best guides we have to the appropriate reaction. Aquinas seems to rule out such a possibility a priori. The only passions he sanctions are those that come *after* judgment, whereas Nussbaum's point is that the passions can help us to formulate the correct judgment.

Aquinas has some room, however, to acknowledge the force of Nussbaum's position. For he can allow the emotions some weight when they are governed by a disposition that itself has been cultivated over the years through discipline and intelligence. Our sense of love, compassion, anger, or indignation does not come at birth, fully developed, but grows and changes over time. To the extent that these emotional reactions are the product of growing maturity and insight, Aquinas should not object to our giving them weight in moral reasoning. This is not a point that I have found him making, but it is a point that we can easily make on his behalf, using the resources of his theory.

What of raw emotion, passion ungoverned by reason and untrained by discipline? Is there room, even here, to give some weight to intuition, or to the innate psychological mechanisms that generate our familiar emotional responses? Here Aquinas would make no concessions. "The good of human beings has reason as its root" (1a2ae 24.3c); emotion ungoverned by reason can be no more good than can action ungoverned by reason. Such emotions could at best be indifferent, neither good nor bad, but their potential to distort reason makes them dangerous, and hence bad unless governed by reason. At this point the force of Aquinas's position begins to emerge. He can concede that raw emotion may on occasion get things right. But do we have grounds to believe that raw emotion reliably gets things right? Aquinas wins this debate, as soon as his opponent concedes the validity of that question. If we explore our emotions and find that there are grounds for taking them seriously, then we will have given those emotions the kind of rational basis that Aquinas wants. If we find raw emotions are

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“bad and misleading,” then we will be forced into the Platonic position. No doubt the results of such an inquiry would be mixed. And again, this makes Aquinas’s point. As rational creatures, we ought not to place blind trust on any aspect of our nature. All aspects of human conduct and inquiry should be subject to rational investigation, to the fullest extent possible, and we should modify our beliefs and behaviors accordingly.

Do we then investigate reason itself? Aquinas of course thinks that we must, as best we can, and this is the focus of the next three chapters. But how can reason be trusted to investigate itself? And why should we use reason to investigate the passions? Why not use the passions to investigate reason? Aquinas of course assumes that reason has priority here, not because it is the distinguishing feature of human nature, but because the task of investigation is one for which reason is best suited. I suspect that anyone who doubts this will not have persevered far enough to read these words.

Part III

Functions (QQ84–89)

Mind and image

Non enim proprie loquendo sensus aut intellectus cognoscunt sed homo per utrumque.

(QDV 2.6 ad 3)

Beginning with Q84, the Treatise takes up the operations of the soul's various capacities. Aquinas officially confines his attention to intellectual operations (see §In.4), but the workings of intellect are not themselves intelligible apart from the workings of sense. Even in nonrational animals, there is something that comes close to the power of reason, the estimative power (§9.1). The human sensory system has something even more sophisticated, a cogitative power, which along with intellect plays a crucial role in human perception (§9.2). These perceptual processes furnish the information (phantasms) which the intellect runs on (§9.3). And even once the intellect receives this information, the sensory powers continue to play a role, because the intellect must constantly turn itself back toward phantasms, relying on the senses to furnish the images that human thinking constantly requires (§9.4).

9.1. Forms and intentions

Aquinas draws a sharp distinction between the sensory and the rational. The one is material, the other immaterial; the one apprehends particular features of the world, the other apprehends the world as universal. One might suppose, accordingly, that the operations of sense and intellect would be likewise segregated. In fact the opposite is true. The cognitive processes of a human being are in large part a cooperative venture between sense and intellect. To understand the operations of intellect, one must first understand the higher sensory operations.

In his *Questions on the Soul*, Aquinas describes the external senses as being “the first in order among the sensory capacities, *immediately* impressed upon by sensibles” (13c). This does not mean that sensible qualities make an unmediated impression on the sense organs. This is not true even for touch and taste, because the organ for these senses is near the heart; it is still less true for the other senses, which receive the impression of sensible qualities only through the mediation of a series of likenesses (*species in medio*), transmitted through air or water. In no case does the sensible quality itself make an *immediate* impression on the sense organ.

What Aquinas seems to mean instead is that the external senses receive an impression that is immediate *relative to the other sensory capacities*. The external senses are first in line, “first in order” as he himself puts it. The other sensory capacities – the so-called internal senses – receive their information through the external senses. In §6.4 we saw how the common sense is mediated in this way: its operation comes only after the external senses have their operation, and it receives the impressions that have already been made on the external senses. In this chapter we’ll see how the other internal senses (memory, phantasia, and the estimative/cogitative power) make their contribution further down the line.

In discussing the way in which nonrational animals act voluntarily, we saw how they “have a certain likeness of reason” (*QDV* 24.2c; §7.2) in virtue of their estimative power. It is the estimative power that is at work when the sheep flees the wolf or the bird collects straw for its nest. Aquinas writes that in these cases there is nothing repellant or attractive about the sensible features themselves: a wolf’s appearance is not intrinsically frightful, the appearance of straw is not intrinsically desirable. But these sensible features trigger a reaction in the estimative power, an urge that results in the animal’s being either repelled or attracted. Aquinas sees a close connection between reason and the estimative power. In fleeing a wolf, or collecting straw, an animal seems to be engaged in the process of categorization – seeing not just colors and shapes, but seeing *the enemy*, or seeing *building material*. The animal seems to be seeing these objects for what they are, which is precisely the task of intellect. Aquinas wants to say that this is in part an illusion. The sheep flees the wolf “as if [*quasi*] because its nature is hostile” (78.4c), whereas in fact the sheep knows nothing of the nature of wolves. In general, the estimative power does not apprehend a thing “as it is under a common nature” (*InDA* II.13.211–12). But although the manner in which the estimative power functions can be deceiving, there is no doubt that animals must have such a capacity. Sheep flee wolves. Birds collect building material. All higher-order (“complete”) animals must have capacities of this sort:

It is necessary for an animal to seek or flee from things not only because they are or are not agreeable to the senses, but also for the sake of some further benefits and uses, or harms (78.4c).

So animals must have some capacity that sees beyond what the senses themselves can see. The estimative power is of course dependent on the senses, and derives its information from the senses. But some of what the estimative power grasps is simply not obtainable through the senses. The animal does not learn that wolves are harmful, or infer as much from their appearance. That information must simply be built into the estimative power.

To mark this distinction between information available to the senses and information accessible only at some higher level, Aquinas borrows some

terminology from Avicenna. The objects of the external senses, Avicenna says, can be grouped together under the heading of *forms*.

A form is that which . . . an external sense first apprehends, and then gives to an internal sense – for example, when a sheep apprehends the form of a wolf: its shape, condition, and color.

In contrast, there are also *intentions*:

An intention is that which the soul apprehends of the sensible, even though the external sense has not previously apprehended it – for example, when a sheep apprehends the intention that it has of the wolf: that it ought to fear it and flee from it – even though its senses do not in any way apprehend this (*De anima* I.5, p. 86).

The key characteristic of intentions is that they are not “in any way” apprehended by the senses. Aquinas stresses this point: “the *proper senses* and the *common sense* are directed at receiving sensible forms. . . . The *estimative power* is directed at apprehending intentions that are not gathered through the senses” (78.4c).

The estimative power, then, receives an indirect impression from the external world, mediated by the external senses and the common sense. But the object of the estimative power is not information that is contained in the sensory impression. It is not as if the estimative power manages to discern the wolf’s status as an enemy by carefully analyzing the information delivered by the senses. There is nothing in that sensory information that could, all by itself, reveal that the wolf is an enemy. The sheep does not – cannot – deliberate over its data in the way that a doctor pores over a set of X-rays. Rather, the sheep is moved by a natural impulse (*instinctus naturalis*), as an untrained clerk might, at the request of a doctor, mechanically scan through those same X-rays in search of a particular image. The wolf sees color and shape, and that color and shape triggers an estimation of danger.

Overall, the estimative power presents relatively few conceptual difficulties. There is nothing very puzzling in the idea that sheep are simply programmed to flee wolves, by a natural impulse. Human beings, on the other hand, pose a considerably greater conceptual challenge, in virtue of our capacity for reason. Despite the superficial similarity between reason and the estimative power, the two capacities are in one important respect inverted in their functions. A sheep, by heeding its natural instincts, manages to transcend its sensory data. Reason, in contrast, transcends instinct, and does so only by returning to the sensory data themselves. Aquinas acknowledges this basic dissimilarity: “the estimative power is directed at apprehending intentions that are not gathered through the senses” (78.4c). In contrast, “intellect cognizes nothing not gathered from the senses” (78.4 obj. 4; see §10.2). The dissimilarity, in turn, points to the fundamental problem of intellectual cognition: to explain how we manage

to take our feeble inputs – the common and proper sensibles – and reach some understanding of the nature of our world. The remainder of this chapter and the next are devoted to that problem.

9.2. Seeing as: Sensation per accidens

A discussion of intellect's operation best begins with a type of sensory operation – what Aquinas calls sensation per accidens. The Treatise has little to say about this kind of sensation, and what it does say tells us neither what sensation per accidens is nor why it is important.¹ Still, it is easy to see that importance by recalling the nature of sensation per se (§6.3). Things sensible per se are those features of the world that themselves make a difference as to how the sense is affected (*InDA* II.13.127–30). Thus color and size are visible per se, whereas being a bird or a tree is not. It makes no difference, as far as the visual impression is concerned, whether the small yellow shape you see happens to be a real bird or a mechanical bird. Being a bird, then, is perceived accidentally. In general, per se sensation is limited to colors and shapes, temperatures and sizes, and so on. But this is not how we see the world. We see a world full of birds and trees, and although we can try to resist seeing the world that way, it would take a continual struggle, and would never be successful for very long. For us, therefore, sensation is almost always sensation per accidens.

In his *De anima* commentary, Aquinas gives two necessary conditions for an attribute's being sensible per accidens. First, the attribute must apply accidentally to something sensible per se. For example, "being human applies accidentally to white, as does being sweet" (II.13.166–67). This is meant to ensure the accidental character of the perception. Second, the attribute must be apprehended by the percipient through some other cognitive power; Aquinas lists as possibilities (1) another sense, (2) intellect, or (3) the estimative/cogitative power (167–74). The first of these is the least interesting: it occurs, for example, when we say that something sweet is *visible* per accidens inasmuch as being sweet is accidental to being white, which is of course visible per se (116–19, 175–81). Still, something sweet is sensible per se, inasmuch as it makes an impression in its own right on taste.

In light of §9.1, little needs to be said about the case of the estimative power. When the sheep senses the wolf and runs, we might say that it senses its enemy. But in fact the wolf, qua enemy, makes no impression on the sheep's senses. The wolf makes an impression because of its size, shape, and smell, and those sensible features trigger a reaction in the estimative power. So we can say that the sheep sees or smells its enemy, but it does so only per accidens.

We cannot say – at least not strictly speaking – that the sheep senses that the object approaching is a wolf. To apprehend a wolf as a wolf requires the intellect. But this is precisely how we human beings do see the world, constantly. Accordingly, Aquinas must believe that the human

experience of sensation is nothing like the experience that other animals have. Whereas we perceive a world full of familiar kinds of objects, animals must lack this level of conceptualization. They see objects, perhaps, but do not see them as members of kinds. The closest animals come to such categorizing is when they put something into the class of things to be fled or pursued:

The estimative power does not apprehend an individual in terms of its being under a common nature, but only in terms of its being the end-point or starting-point of some action or affection. It is in this way that a sheep recognizes the lamb not inasmuch as it is this lamb but inasmuch as it can nurse it. It recognizes this grass inasmuch as it is its food (*InDA* II.13.211–217).

The sheep does not even recognize its offspring as such – it lacks the concept *offspring* – but merely recognizes it as something to be nursed. And this, moreover, is not to say that the sheep has the concept of nursing, but only to say that the appropriate sensory input triggers a desire to nurse, and consequently triggers the appropriate action.

We too act on this sort of instinct from time to time. But our sensations are also accompanied by continuous conceptualization. Human sensation is constantly sensation per accidens; such sensation, for Aquinas, could not take place without intellect. We are so accustomed to our way of seeing things that it is not easy to recognize the conceptualization involved. Sensation without any higher conceptualization – “plain ordinary sensation” – would seem so bizarre and extraordinary that we would scarcely recognize it as sensation at all. This is not to say that *all* human sensation is sensation per accidens. Perhaps we sometimes see a door and walk through it without seeing the door as a door. But if all of our sensation were like that, we would not be functioning as human beings.

Sensation, for us, standardly involves conceptualization, but this should not be taken to imply that the intellect is directly involved. Here, as in the previous chapter, the cogitative power plays a crucial role. The cogitative power is the human equivalent of the estimative power, but it does much more. In addition to supplying us with instinctive fears and desires (as when we shudder at the sight of a rat), it is responsible for our seeing things as individuals:

If a thing is apprehended as an individual – e.g., when I see something colored I perceive this human being or this animal – then this sort of apprehension in a human being is produced through the cogitative power (*InDA* II.13.191–94).

Without the cogitative power, the external senses would apparently see nothing more than various patterns of sensible qualities. They would see no objects, no individuals. The external senses simply don’t have the cognitive firepower to turn these shifting patterns into individual, enduring objects.

I have already discussed in §8.4 how the cogitative power seems to infringe on Aquinas’s division of labor between intellect and sense.

Patterns or objects

Do animals perceive objects? Do they see, for example, just a pattern of colors and shapes? It is hard to believe that dogs and cats perceive nothing more than this, but Aquinas's account might plausibly be taken to suggest as much. Only human beings have the cogitative power that is responsible for our seeing things as individuals. Now one might think that in other animals the work of the cogitative power is performed by the estimative power. But Aquinas indicates otherwise when he says of the sheep that "its natural estimative power does not in any way apprehend an individual to which its acting or being affected does not extend" (*InDA* II.13.218–20). The estimative power functions only when the stimulus triggers some sort of innate reaction, either fear or desire. *Perhaps* in these cases the animal can be described as seeing an object, not merely seeing a colored visual field. But what happens in cases where the estimative power is not involved? For animals there seems to be no further capacity involved beyond the bare external senses and the common sense. And it seems that these faculties, by themselves, form no perceptual content beyond shape and color. Implausible as it seems, then, that often may be all that the sheep sees.

Somehow the cogitative power takes from the intellect a grasp of our basic conceptual categories: "the cogitative power apprehends an individual as existing under a common nature. It can do this insofar as it is united to the intellective power in the same subject" (*InDA* II.13.206–9). Unhelpfully, he speaks of the cogitative power's receiving "a kind of overflow" (78.4c) from intellect. Elsewhere, he speaks of its being "at the boundary of the sensory and intellective parts" (III *SENT* 23.2.2.1 ad 3). Despite the obscurity of these remarks, Aquinas is not violating his basic constraint on sensory activity. The senses – the *internal* senses – can categorize, they can make comparisons and even inferences. But what the senses can never do, because of their materiality, is grasp universal concepts (see §10.3). In virtue of the cogitative power, one sees a thing as a human being, or as a piece of wood (*InDA* II.13.209). Aquinas is relying on a distinction between sorting individuals by means of the intellect's concepts and conceiving of those individuals as members of a broader class. We do the latter when we use language, and this requires intellect. The former occurs whenever we perceive the world for what it is. There seems no reason not to count this as a form of conceptualization. But it is not conceptualization in the fullest sense, and so it is possible to ascribe this role to the cogitative power.

Without the cogitative power, we could not have anything like human sensation. The cogitative power itself depends on the intellect as the source of its classificatory scheme, but the cogitative power apparently does its work without the intellect's active involvement.² Still, there is a further kind of sensation per accidens that does directly involve full-fledged intellectual conceptualization. When we see something not as an individual but as "something universal" (*InDA* II.13.183), then we are engaged in sensation per accidens through intellect.

This last form of sensation raises many questions. As a first step, it is helpful to note how Aquinas distinguishes the various levels of intellectual operation. The Treatise discusses three levels:

1. The first operation of intellect, the simple intellective grasp of some universal feature of an object.
2. The second operation, composition and division, which involves putting various concepts together, by either affirming one of another (composition) or denying one of another (division).
3. The third operation, reasoning, which involves a complex ordering of composite thoughts.

The following passage describes all three stages:

The human intellect does not immediately, in its first apprehension, acquire a complete cognition of a thing; instead, (1) it first apprehends something about it, namely the quiddity of that thing, which is the first and proper object of intellect, and then it intellectually grasps the proper attributes, the accidents, and the dispositions surrounding the thing's essence. Because of this, (2) it must necessarily compose and divide one thing that it has apprehended with another, and (3) it must go from one composition and division to another, which is to use reason (85.5c).³

I have more to say about these operations in the next chapter. For now, focusing on the first, it may seem that this simple apprehension of a thing's quiddity or essence just is the operation that Aquinas describes as sensation per accidens through intellect. I see the piece of wood, and I grasp that it belongs to a certain kind: *wood*, or *firewood*, or *elm*. (We needn't be picky, for present purposes, about just what will count as the essence of the object.) This seems to be precisely what Aquinas has in mind by *seeing* something as universal.

But there are several reasons why we cannot simply identify this first operation of intellect with intellectual sensation per accidens. First, not all such first operations count as cases of sensation per accidens. Aquinas himself explains why:

Not everything that can be apprehended by intellect in the object of sensation can be called sensible per accidens, but [only] that which is apprehended by intellect right when the object of sensation is encountered. For example, right when I see someone speaking or moving, apprehending through intellect his being alive, I can say on this basis that I see he is living (*InDA* II.13.184–90).

We can speak of sensation per accidens whenever we see something (in the strict sense) and immediately on that basis make an intellectual judgment about what it is that we are seeing. If I simply reflect on my absent friend Ross, considering him as a friend, I am not thereby engaged in sensation per accidens, because there is no occurrent sensation. Very often, intellectual cognition will occur in this way, without any accompanying sensation, and so will not meet Aquinas's test. Also, intellectual cognition often takes time and effort (see §10.5). It does not always come at once, right when one sees an object. But sensation per accidens requires that sort of immediate apprehension. As Aquinas puts it elsewhere (IV *SENT* 49.2.2c), the accompanying cognition must occur "right away, without hesitation or inference [*statim, sine dubitatione et discursu*]." If the intellectual judgment does not come in a flash, you cannot be said to be *seeing* it.

Even when such intellectual cognition does occur with sensation in the way Aquinas here describes, it will not always be a case of the intellect's first, simple operation. The example Aquinas offers, in fact, is a case of a composite judgment, where the attribute of *living* is connected to a particular person. This would count as the second operation of intellect. So the first operation of intellect cannot be reduced to a kind of sensation per accidens.

Aquinas's example is notable for not being the sort of judgment that we ordinary find ourselves making. Only a philosophically obsessed biologist – Aristotle, say – would see a person talking and explicitly form the thought that that person is alive. Surely this is not the case Aquinas has in mind. Surely, too, he is not thinking of a case where we are worried the person might be dead. (Look, she's trying to talk!) Aquinas rather seems to be pointing toward the unspoken conceptualization that we constantly engage in without noticing.⁴ We do, as Aquinas puts it, *see* that people are living, and we *see* that they are people. Although we do not ordinarily notice it, our everyday lives are supported by a vast hierarchy of conceptual judgments.

It seems quite difficult to draw a sharp line between the contribution of the cogitative power and that of the intellect. Through the cogitative power we see "this human being as it is this human being, and this piece of wood as it is this piece of wood" (*InDA* II.13.209–10). Through the intellect we might see those same things, but we would do so as "something universal." It is clear that certain theoretical commitments drive Aquinas to draw this distinction: only the intellect can grasp the universal, whereas only the senses can directly grasp the individual (§8.4, §10.3). But the cogitative power approaches so close to the universal as to make the distinction problematic: after all, Aquinas allows that "the cogitative power apprehends an individual as existing under a common nature," albeit not a universally conceived common nature. If there is a distinction to be made here, it is hard to know quite where it lies.⁵ We certainly don't *experience* any clear difference in kind of the sort Aquinas describes. A more detailed investigation would have to turn toward experimental work in the psy-

Agnosia

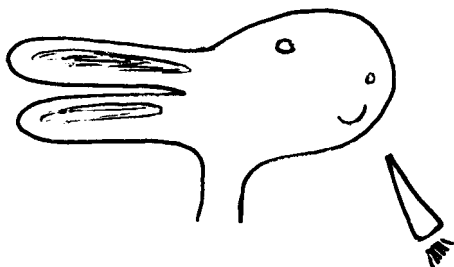
... disorders whereby the patient cannot interpret sensory information correctly even though the sense organs and the nerves leading to the brain are operating normally (Gregory 1987, p. 19).

Aquinas's divided account of higher-level sensory processing receives some support from the study of agnosia. In visual agnosia, for instance, there seems to be a fundamental difference between patients who have intact visual perception but cannot recognize *what* those objects are (associative agnosia) and patients who cannot even recognize simple patterns (apperceptive agnosia). In the first case, the patient may be able to draw a perfect copy of the picture he is seeing (a key, a bird) but he cannot identify what the object is. In the second case, although the patient can see, she cannot identify Xs or Os, and cannot even draw a copy of these simple shapes. (See Farah 1990 for a fascinating discussion of this topic.)

Aquinas's account of how the intellect and the cogitative power enter into sensation is an attempt to draw a distinction of this sort. But a close look at the actual phenomena shows that Aquinas's account is untenable in all sorts of ways. For example, patients can suffer from visual agnosia and still have normal cognition through their other senses. Also, visual agnosia can be confined to a small range of objects – for example, only human faces (prosopagnosia), or only written words (alexia). So it is clearly too simple to postulate a single cogitative power for all five senses. Thirteenth-century philosophy of mind looks hopelessly crude in the face of such detailed empirical research. (So far, twenty-first-century philosophy of mind looks only slightly less crude.)

chology of perception. Are there situations in which we can tease apart different levels of conceptualization? Do the different levels correspond in any way to Aquinas's distinctions? No doubt the details will prove quite different from what Aquinas describes. But we should be sympathetic to the general tenor of his remarks. In attempting to discriminate different levels of processing within a seemingly unified mental event, Aquinas is pursuing the same project that engages contemporary cognitive scientists.

I have been assimilating Aquinas's account of sensation per accidens to the phenomenon of seeing as. We see an object as a living being, as a person, and so on. When Wittgenstein considers such cases in the second part of the *Philosophical Investigations* (IIxi, pp. 193–208), he focuses on cases where an object can be seen under one of several aspects. The most famous case is that of the duck–rabbit, the drawing that can be seen as



The duck-rabbit spoiled. Cf. *Phil. Invest.* IIxi.

either a duck or a rabbit. The cases that Wittgenstein discusses are all of this special kind: cases where the drawing is ambiguous and can be seen in one of several ways. One might suppose, then, that the phenomenon of seeing as is confined to such cases. In fact, the phenomenon is quite general. One sees the drawing as a duck even before one notices the possibility of another interpretation. One would see the drawing as a rabbit even if the drawing were misdrawn in such a way that it could not sustain a duck interpretation. You see your colleague as your friend, even though you cannot help but see him in that way. (Next week you will discover that he is not your friend at all, but simply using you in order to advance his own career. Then, suddenly, you will see him in an entirely different way.) The dual aspect cases that Wittgenstein focuses on are important because they reveal the hidden processes at work. The fact that we can see the same drawing, the same sensory impression, as either duck or rabbit, helps us to tear the purely sensory level apart from the higher conceptual level. We discover that ordinary sensation constantly rests on judgments about what things are.

Why am I entitled (as Aquinas says that I am) to say “I *see* he is living”? Is *seeing as* a genuine case of seeing? Is it entirely a matter of seeing?⁶ Wittgenstein was puzzled by such questions: “‘Seeing as . . . ‘is not part of perception,’ he writes. “And for that reason it is like seeing and again not like seeing” (p. 197). As a result, he finds himself tempted to treat *seeing as* as a hybrid combination of sensation and thought: “The flashing of an aspect on us seems half visual experience, half thought” (p. 197).” Again, “Is it a case of both seeing and thinking? or an amalgam of the two, as I should almost like to say?” (p. 197). This line of questioning strikes him as wrong-headed; hence he immediately adds: “The question is: *why* does one want to say this?” The nature of his concern becomes clear a little later when he writes,

But how is it possible to *see* an object according to an *interpretation*? – The question represents it as a queer fact; as if something were being forced into a form it did not really fit. But no squeezing, no forcing took place here.

When it looks as if there were no room for such a form between other ones you have to look for it in another dimension. If there is no room here, there *is* room in another dimension (p. 200).

It is a mistake, in other words, to try to understand *seeing as* in terms of a blend of seeing and thinking (or “interpretation”). Representing the phenomenon in those terms turns it into a mysterious (“queer”) hybrid. This shows that a mistake is being made, and that the whole problem needs reconceptualization “in another dimension.”

Wittgenstein thinks we must avoid an explanation couched in terms of “one or another inadequate paradigm,” as Malcolm Budd (1987) aptly puts it (p. 5). Aquinas, in contrast, thinks that *seeing as* can be explained without departing from his ordinary categories of sense and intellect. This might seem to be the very mistake Wittgenstein cautions against: “we must be careful not to think in traditional psychological categories. Such as simply dividing experience into seeing and thinking . . .” (*Last Writings* 564). But Aquinas is not dividing up the experience. Rather than offering an explanation in terms of one or the other, or in terms of a queer amalgam of the two, Aquinas believes that sense and intellect work in tandem to produce the effect that Wittgenstein labels *seeing as*. That this is how Aquinas views the process is clear from the example quoted above from *InDA* II.13. The example describes two concurrent cognitive events: (a) “I see someone speaking or moving,” while (b) “apprehending through intellect his being alive.” The result is (c) “I see that he is living.” In (a), presumably, there is no conceptual or propositional content at all. I do not see that he is speaking or moving – that would already be sensation per accidens. Instead I am simply seeing a thing (a complex of sensible qualities) that happens to be speaking (*video aliquem loquentem*).⁷ As soon as the senses do this, intellect takes over, apprehending something that can be abstracted from this complex of sensible qualities – being alive (*apprehendo per intellectum vitam eius*). When described in this way, it becomes clear how compressed the example actually is. One does not go immediately from raw (unconceptualized) sensible qualities to the universal *being alive*. First one must see these qualities as a person, then as a person talking. (Perhaps here the cognitive power is at work.) Such complications only reinforce Aquinas’s point, which is that pure, unconceptualized sensation is constantly subject to conceptualization. Without trying to construct a precise account of the various stages involved, Aquinas simply notes, “I can say on this basis that I see that he is living” (*video eum vivere*). The sensation is now propositional, which entails conceptualization. But despite the fact that at least two concurrent processes are involved, sensory and intellectual (and perhaps also cognitive), the result is something that feels like a single process, the process of *seeing as*.

Here again Aquinas displays his tendency to explain cognition in terms of a sequence of processes occurring simultaneously within different capacities of the soul. Such accounts are now commonplace among cogni-

tive scientists, who standardly think of the mind in terms of a series of information-processing modules, each of which plays a role in the events that we refer to as *thinking* and *perceiving*. Such accounts can seem counterintuitive when the event in question appears introspectively as a single, unified event. It is one thing to think of our digestive process as being completed over a series of steps, with each organ – stomach, small intestine, and so on – playing its distinctive role. But when the operation in question is one that we are conscious of, one that feels like a single act of mind, then it is harder to conceive of it as the outcome of collaboration among several different faculties. This is perhaps part of what troubled Wittgenstein. “Is it a case of both seeing and thinking,” he asks, “or an amalgam of the two?” The latter proposal is obscure – Wittgenstein is certainly right about that – but it is harder to see why he objects to the former. Perhaps the difficulty, for him, was that *seeing as* does not feel like two distinct operations. We experience *seeing as* as something single and unified; we are not conscious of two different events. We do not see a thing’s color and shape *and* see that it is a bird; we simply see the bird. For Aquinas, this kind of introspective evidence disguises the true nature of the operations. Here, as elsewhere, Aquinas thinks of cognition as the cooperative outcome of the soul’s various capacities, working in tandem.⁸

9.3. Phantasms

Sensation *per accidens* is important because it plays such a pervasive role in our cognitive lives. In sensation of this kind, the intellect plays a leading role. Still, this is just one limited kind of intellectual activity, limited to instantaneous judgments about sensation. So enough about the senses. Isn’t it time to focus squarely on intellect?

Well, not quite. It turns out that Aquinas gives sensation a still more pervasive role in intellectual cognition, through the agency of phantasms. Aquinas supposes that human beings cannot understand anything without phantasms. And, since phantasms are sensory representations, this in turn entails that the operation of intellect always requires the concurrent operation of the sensory capacities. What do phantasms contribute to intellectual cognition? They in fact make two essential contributions to the process: first, they provide the raw data for intellect’s concept formation; second, they give content to the intellect’s actual thoughts, even after the relevant concepts have been formed:

Our intellect both abstracts intelligible species from phantasms, inasmuch as it considers the natures of things universally, and yet it also cognizes those natures in phantasms, because it cannot cognize even the things whose species it abstracts, except by turning toward phantasms (85.1 ad 5).

The first of these contributions is relatively unproblematic. Intellect must of course acquire its information from somewhere; given Aquinas’s empiricism (§10.2), the source must be sensory. (It is not obvious why

Corporal punishment

The ongoing contribution of the senses to intellect comes out clearly when Aquinas considers whether the bodies of the damned will be incorruptible and hence suffer eternal punishment (*QQ* 7.5.1). His answer is, Yes. But why, the third objection asks, should a person's body be punished eternally for sins committed by the soul alone? (The objector speaks of those who commit strictly "spiritual sins" – heretics would be a clear example.)

Aquinas handles this issue by insisting that the body has a share in every human action, even the intellect's:

For although the body does not share in the acts of our intellective part as the instrument of the act, still it shares in them as a representing object. For the intellect's object is the phantasm, just as color is the object of sight. . . . But there is no phantasm without a bodily organ. Accordingly, it is clear that in intellective cognition, as well as in the soul's other actions, we in one way or another use the body (ad 3).

This illustrates how all human activities, even those that least seem to require the body, are the joint productions of body and soul. This in turn makes it all the more natural for Aquinas to insist, contrary to the dualist tradition he associates with Plato, that human beings are not their souls, but the composite of soul and body (see §2.1). Hence in this quodlibet Aquinas makes the further reply that, strictly, it is the person who sins, not his soul. Therefore the whole person is punished, soul and body.

the source should always be phantasms in particular; I return to this point below.) The second contribution is harder to explain. Why should the intellect turn toward phantasms a second time, once it has already abstracted the universal natures that are its subject? What more is there to learn? Aquinas thinks that such a turning back is always required, at least in this life. I take up this second, more puzzling doctrine in the next section. First, we should consider in more detail what phantasms actually are.

Phantasms are "the images of bodies" (*III SENT* 23.1.2c), "the likeness of a particular thing" (84.7 ad 2). Indeed, because they are located in bodily organs (and are in fact the product of the physical states of those organs), phantasms are limited to being likenesses of particular things: each is "a likeness of a singular thing that exists here and now" (*InDMR* 2.56–57 [314]).⁹ But despite the status of phantasms as "images" and "likenesses" of particular things – things that exist "here and now" – phantasms are not simply our ordinary sensory images. Rather, phantasms are the leftover impressions from those sensory images:

Something is perceived by sense in either of two ways. One way is through the impression on the sense by the sensible quality: in this way both proper and common sensibles are cognized by the proper senses and the common sense. In a second way something is cognized by a kind of secondary motion that is left over from the first impression on sense by the sensible quality. This motion remains even for some time after the sensible qualities are gone, and it pertains to phantasia. . . . But the phantasm that appears through a secondary impression of this sort is “a passion of the common sense” [450a10]. For it *follows* the complete sensory impression, which begins at the proper senses and ends at the common sense (*InDMR* 2.130–44 [319]).

Phantasms, then, are the remnants of sensation. They are images, not the images of an occurrent act of sensation, but something left over from sensation. (This is a controversial point to which I return below.)

It would be natural to suppose that phantasms are found only in the internal sense of phantasia (= imagination). In fact, this is not the case. Phantasms are found in three different internal senses: imagination, memory, and the cogitative power (89.5c, *SCG* II.73.1501, *InDMR* 3.274–75 [349]). Given that phantasms are leftover sensory impressions, it is not surprising to find them present in various internal senses. In making a case for the necessity of the various internal senses, Aquinas had begun by pointing to the need for capacities that preserve sensory impressions:

Through the sensory soul an animal must not only *receive* the species of things that are sensible when they, being present, make an impression on that animal, but it must also *retain* and *preserve* these species (78.4c).

He then went on to distinguish the two internal senses that play this role, phantasia and memory. Phantasia preserves the forms taken in through the senses; it is our storehouse of familiar images, sounds, and so on. Memory, in contrast, preserves the intentions apprehended through the estimative (or cogitative) power. Here ‘intentions’ is being used in Avicenna’s sense, as information not accessible to the external senses, like the fact that wolves should be feared, straw collected (see §9.1). It was in fact Avicenna who proposed this way of distinguishing between imagination and memory. He conceives of these two capacities as having parallel functions, one the treasury for the common sense, the other the treasury for the estimative power. Given that phantasms just are stored sensory impressions, and given that the estimative power is a sensory power, it is not surprising that Aquinas locates phantasms in both memory and phantasia.

The difficulty with Avicenna’s account – from Aquinas’s perspective as well as our own – is that it leaves no obvious way of connecting memory with the past. Aquinas’s readers would have taken it for granted that memory, whatever else one might say about it, must have some kind of link with experiences of the past. This was, as Aquinas says, “the common linguistic usage” (*QDV* 10.2c). Moreover, it was a usage that had Aristotle’s authority behind it: his treatise *De memoria* begins by determining

the object of memory: “memory concerns the past” (449b14). One might conclude simply that Avicenna and Aristotle were talking about two different things, but Aquinas characteristically attempts to reconcile the two accounts.¹⁰ He retains from Avicenna’s account the claim that memory is the storehouse for intentions received from the estimative power. But at the same time he counts *being in the past* as itself such an intention (78.4c). This leaves Aquinas with the view that memory stores impressions that have a certain link with some intention: either with the past or with something dangerous or desirable. Phantasia, in contrast, simply stores images, without attaching to these images any further associations. This Avicennian account appears even in the *De memoria* commentary:

Memory is “a disposition (i.e., a certain dispositional preservation) of a phantasm” [451a16] – not of course in its own right, for this pertains to the imaginative power, but inasmuch as the phantasm is an image of something already apprehended (3.273–78).¹¹

When you call to mind the generic image (or sound or smell) of an elephant you are using phantasia. When you call to mind an image (sound, smell) of an elephant that you associate with some particular past experience – in the zoo, on safari, and so on – then you are using memory.

It is not clear why there should be a connection between memories of the past and memories of the sorts of intentions perceived by the estimative power. Aquinas offers a suggestion. He says it is an indication of memory’s connection to the estimative power that “the basis for remembering is formed in animals from intentions of this kind – for instance, that a thing is harmful or agreeable” (78.4c). The point seems to be that animals form memories much more readily when the experiences in question are either harmful or agreeable. A cat remembers being punished or rewarded; the event is remembered because it is linked to some pleasant or unpleasant intention. Similar circumstances in the future will trigger a perception of the same intention. This capacity seems to be the core of animal memory, and for Aquinas it justifies associating memory with the estimative power.

Phantasia is generally supposed to play a central and pervasive role in Aristotle’s philosophy of perception.¹² It would therefore be surprising if this faculty did no more for Aquinas than store generic perceptual images. And in fact phantasia does play a further role:

Although the *first* impression on the power of imagination occurs through the movement of sensibles, . . . still there is an operation of the human soul that, by dividing and compounding, forms different images of things, even ones that have not been taken in by the senses (84.6 ad 2).

This second operation, the formative one, also belongs to imagination/phantasia. When engaging in it, “the power for imagination forms for itself the image [*idolum*] of an absent object, or even of one never seen”

(85.2 ad 3). Phantasia, therefore, does not just passively take in and store images. It also has an active capacity to form new images out of the building blocks it has stored within. The stock example is imagination's forming the image of a gold mountain out of its images of a mountain and of gold (78.4c; 12.9 ad 2; *QQ* 8.2.1c). More colorfully, Aquinas describes how the imagination can lead to sin "... when someone imagines the three divine persons as three human beings" (*QDM* 7.3 ad 6). (Because only the imagination is at work here, without any rational consent, this is merely a venial sin.)

Some readers of Aquinas have wanted to attribute a still greater role to phantasia and phantasms. Anthony Kenny suggests that phantasms can often be identified generally with "sense-appearances"; he claims that "it also appears that he [Aquinas] thinks that whenever we see something we have at the same time a phantasm of what we see."¹³ Further, as Kenny notes, Aquinas often relies on phantasms to explain illusions. Here, for instance, is how he explains cases of deception even with regard to the proper sensibles:

Such error occurs not because of sense, but because of phantasia, through whose disorder it sometimes happens that what is taken in through the senses reaches phantasia differently from how it is perceived by sense – as is clear in the case of the phrenetic, in whom the organ of phantasia is afflicted (*InMet* IV.14.693).

All of this suggests that phantasia plays a part in sensation itself and is not merely something that "follows the complete sensory impression" (*InDMR* 2.143 [319], as quoted earlier). Kenny argues that we must choose between either giving phantasms a role in ordinary sense experience or else attributing to Aquinas "a regrettable theory that external sense-experience was accompanied by a parallel series of phenomena in the imagination" (1993, p. 93).

I think we should reject both options. It must be true, on Aquinas's account, that sensation is accompanied by a parallel series of events in imagination. But it is misleading to characterize these events as "phenomena," because all that phantasia can be doing at that point is preserving the images that are being captured by the senses. Phantasia, at this point, functions very much like a tape recorder. Now, as we have seen, phantasia does have one further capacity, the capacity to manipulate these images. But Aquinas nowhere says that phantasia has the third function of producing sensory experiences. Far from being responsible for all conscious experience, it seems to me that phantasia cannot itself produce any conscious states, even illusory ones. Phantasia is a device for storage, not for perception. The latter is simply not a capacity that phantasia possesses.

If this is true, then there must be some other sensory capacity that *produces* the experiences or phenomena associated with phantasia. That capacity, Aquinas says, is the common sense, or the "sensory principle," as he

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often calls it (see *InDA* III.3 *passim*). Aquinas is most explicit on this point when discussing the question of how the devil might directly influence our internal judgments. The question requires a careful treatment of the ways in which nonveridical sensory experiences occur. Aquinas notes that all sensory apparitions – while asleep or awake, healthy or sick – can occur through physical change (see note 9, above). Then he claims that in all cases the process involves bringing some kind of species or impression to the common sense (*principium sensitivum*). Here is how he describes the process when it occurs voluntarily, in someone wide awake:

Human beings that are awake and in control of reason, through the voluntary movement of their spirits and humors, bring internally preserved species from treasuries of a certain kind to the sensory principle. *As a result of this*, they imagine certain things (*QDM* 3.4c).

The treasuries are phantasia and memory. The species preserved there have to be taken somewhere else, to the common sense, in order for someone actually to imagine anything. Phantasia alone cannot bring this about; it is the storehouse.¹⁴

In light of these findings, we can understand the role of phantasia in illusions. Phantasia must produce illusions not by itself generating non-veridical experiences, but by feeding nonveridical images to the common sense. When one's phantasia is healthy, this will not occur. The imagination remains under control, quiet. But the phrenetic, who suffer from fever and delirium, lose control of their imaginations. In cases of this sort, phantasia will not remain quiet, but will drown out the veridical sensory impressions. The common sense, at the center of the storm, is unable to discern reality from illusion.

In this last paragraph I spoke of phantasia's "feeding" images to the common sense. Often, this seems to be how Aquinas conceives of the process, which means that we can attribute a third and last operation to phantasia: the operation of presenting (or representing) images to other faculties. Aquinas describes phantasia as having not just the job of storing images, but also the job of representing images to intellect (*QDV* 15.2 ad 7); often, he speaks of the senses "representing to the intellectual soul its proper object" (*QDA* 15c). Like any tape recorder, then, the phantasia has the capacity to play back the images. But someone still has to be listening, and this role will fall either to intellect or to the common sense.

Phantasia, then, simply is our capacity for storing, rearranging, and presenting generic sensory impressions. Memory is our corresponding capacity for handling impressions that have specific associations. Phantasms are the impressions contained in each of these so-called treasuries. If this is all phantasms are, then one might well wonder why they play such a central role in intellect's operations. Shouldn't ordinary, occurrent acts of sensation often serve as the data for intellectual judgments – especially in the

cases of *seeing as* considered in §9.1? Aquinas thinks not; he thinks that the intellect can never draw on the sensory impressions themselves, without the mediation of phantasms:

Because the distance between intelligible being and sensible material being is so extreme, the form of a material thing is not taken up by intellect right away, but is brought to it through many intermediaries. So, the form of something sensible is initially in the medium, where it is more spiritual than in the sensible object, then it is in the organ of sense, next it is led to phantasia and to the other lower powers, and finally it is brought all the way to intellect (*QDA* 20c; see 55.2 ad 2, *QDV* 19.1c).

Aquinas is not making a metaphysical point about the problematic causal relationship between the physical senses and the spiritual mind. One of the principal aims of Part I of this study was to show that Aquinas does not face that problem in its traditional dualist form (and see §10.3). His point here is instead to stress the complicated cognitive processing that must occur between the external senses and the intellect. In §9.1, we saw how cases of intellectual *seeing as* involve the intellect's making a judgment "right away" about the sensory impression. But, as before, we can see how that description is misleading. The intellect cannot make any judgment until the information is conveyed to "phantasia and the other lower powers" – that is, to the other internal sense: common sense, cogitative power, and memory. So the intellect always has phantasms for its raw material. He speaks of *phantasms* because of the higher-level processing that takes place before the intellect comes onto the scene.

9.4. The turn toward phantasms

Phantasms are central to an account of intellect because they play two essential roles, furnishing intellect with its initial data and then serving as the objects of some kind of further *conversio* back to sensory images. The indispensability of phantasms is a theme that goes back to Aristotle – "the soul never thinks without a phantasm" (*De an.* III 7, 431a16–17; see 431b2, 432a8–9, a13–14, *De memoria* 450a1) – but Aquinas makes the claim his own to such an extent that it can scarcely be considered Aristotelian.¹⁵ He gives particular attention to the second, more surprising role of phantasms, as the objects toward which the intellect must constantly turn. Although it is plain that Aquinas places great weight on this doctrine, commentators have made little progress in understanding just what the doctrine means. Here I offer an account.

The Treatise defends the turn toward phantasms in 84.7, which is in fact Aquinas's most extended treatment of the topic. The main reply begins by offering two indications (*indicia*) of the need for this turn toward phantasms. These are not decisive proofs, and certainly not demonstrations; they are intended as pieces of empirical evidence that tend to confirm the

hypothesis. First is the obvious fact that our ability to think can be impeded by damage to our bodily organs, especially the brain. Since Aquinas takes himself to have already established that the intellect is immaterial – neither a body nor operating through a bodily organ (75.2c) – this fact presents a puzzle. The puzzle is easily accounted for if intellect’s operation is impeded only with respect to acquiring information. But Aquinas notes that damage to the body impedes even our thinking about things we already have information about. This is truly puzzling, because much of QQ75–76 rests on the claim that the intellect “has an operation on its own, which it does not share with the body” (75.2c; see §2.2). If some operation is intellect’s own, then it seems that it should be able to continue thinking, regardless of what happens to the body.

Aquinas knows little about the varieties of brain damage and mental disfunction, and their correlations to mental activity. Still, he offers two fairly specific examples:

We see that when the power for imagination has its action impeded by damage to the organ (as happens to the phrenetic), and likewise when the power for memory has its action impeded (as happens to the lethargic), the person is impeded from actually cognizing through intellect even the things he has already acquired knowledge about (84.7c).

Here Aquinas is making rather definite physiological and psychological claims: he associates damage in two different parts of the brain with two specific kinds of mental disorders. But the details here aren’t meant to carry much weight; the argument is, as Aquinas says, merely an *indication* of his thesis. It is enough if it establishes that the brain (hence the sensory organs) are somehow necessarily involved in intellect’s operations (at least in this life).

The specifics of this involvement become more clear when Aquinas presents the second piece of evidence for his thesis:

Second, anyone can experience within oneself that when one tries to understand something, one forms certain phantasms for oneself by way of examples, in which one examines, as it were, the thing one is striving to understand (84.7c).

This passage makes it clear that the turn toward phantasms involves somehow thinking via images. Aquinas describes the familiar case of our forming internal images of the things we are trying to understand. In such a case, in other words, intellect is trying to perform its operation, and in doing so it turns toward phantasms. Such phantasms serve as “examples” (*exempla* ≈ pictures or models) of the concept being investigated. A series of assumptions is at work here: first, that phantasms are sensory images (“the likeness of a particular thing” (84.7 ad 2)); second, that the intellect is itself incapable of such images; third, that the intellect’s role is to apprehend the universal natures of things (“the only thing our intellect directly cognizes is universals” (86.1c)). It is a matter of common experience, Aquinas claims, that these higher intellectual operations are constantly

supplemented by concrete sensory images. We see further evidence of this in teaching, he adds, where “we propose examples to someone by which he can form phantasms for himself, in order to understand” (84.7c; see 117.1; *QDV* 11.1; *SCG* II.75.1558).

Although this second indication points to the kind of process Aquinas has in mind, it falls far short of establishing the thesis he set out to prove, that “it is *impossible* for our intellect, in its present state of life . . . , actually to understand [*intelligere*] anything without turning toward phantasms” (84.7c). The first indication established that the intellect needs the brain for something, but left unresolved the nature of the processes at work. This second indication describes a definite process, but hardly makes the case that this process is constantly required. Our use of *exempla* indicates that we *often* turn toward phantasms; it is likewise clearly *useful* to turn toward phantasms. But this hardly establishes that we must do so, that intellectual operation is otherwise impossible. Moreover, the cases Aquinas describes here are cases where we are still trying to acquire knowledge. But, as noted, these aren’t the puzzling cases. The puzzling cases are those in which we already have the knowledge, and need to turn toward phantasms even to actualize it. What good are phantasms then?

Aquinas is of course aware that more needs to be said. He immediately moves on to the *reason* why intellect must make this turn toward phantasms. The reason he gives rests on establishing, for the first time in the Treatise, a detailed account of the objects of intellect. In Q78 Aquinas had established the nature of *sensibilia* (see §6.3); here he begins to describe the nature of *intelligibilia*. Different kinds of intellects, it turns out, have different proper objects. The angels have as their proper objects intelligible, immaterial things (12.4c, 85.1c). In contrast, “the human intellect, which is connected to a body, has as its proper object a quiddity or nature existing in bodily matter” (84.7c). The human intellect is not aimed at purely abstract natures, a world of Platonic Forms (§10.1), but at the natures that exist in particular individuals. Given that these are the objects of intellect, Aquinas says that “the nature of a stone, or of any material thing, cannot be completely and truly cognized except by being cognized as existing in a particular” (84.7c). This is not to say that it is the intellect’s job to apprehend particulars. Aquinas immediately adds that “we apprehend the particular through sense and imagination.” Nor does Aquinas mean that the intellect’s grasp of the natures of things should entirely match how those things exist in the particulars. We apprehend the natures of things “not in keeping with their existence in individual matter, but in keeping with their being abstracted from that” (12.4c). We apprehend these natures as universals, after all. Still, our grasp of universal natures must be faithful, ultimately, to the particulars. On Aquinas’s view such natures do not exist outside of material individuals (12.4c; *InDA* II.12.96–116), and so any claims that we make to understand such natures must capture the universal as it exists in individuals. The physical world is the ultimate object of intellect.

9.4. THE TURN TOWARD PHANTASMS

These claims, combined with Aquinas's confidence that the world has been designed according to a rational plan (see §6.2), make it easy to infer some facts about the way intellect must operate. As he says, "a cognitive capacity is proportioned to what it cognizes" (84.7c). Given that the intellect's role is to understand universal natures *as existing in a particular*, it is only to be expected that the intellect is *constantly* casting its attention on those particulars. Since the intellect itself cannot directly apprehend particulars (86.1c), this implies that it must turn toward the senses, constantly. He concludes,

So it is necessary, in order for the intellect actually to understand its proper object, that it turn toward phantasms so as to examine a universal nature existing in a particular (84.7c).

This is not just a useful practice, but a necessary one. It is not a matter of sound methodology; it is not something learned, in the way that careful drivers learn to use their rearview mirrors. This is, rather, the way that all human beings do and must think. Our intellects, in this life, can work no other way.

Things might have been different, and things will be different. As Aquinas says at the end of his main reply, the turn toward phantasms would not be necessary if either (a) "the proper object of our intellect were a separated form" or (b) "the natures of sensible things did not subsist in particulars, as the Platonists held." In either case, we would be under no requirement to match our beliefs with the physical world, and there would be no reason for us to make constant reference to that world. In such circumstances, the process of thought might be carried on not only with our eyes closed, but with our minds free of all sensory images. As things stand, Aquinas believes we cannot possibly think like that. We do, inescapably, think in images, at least in this life. When our soul is separated from the body, then God will directly provide us with information about intelligible realities. Then we will be functioning like angels, though at a much lower level (89.1 ad 3; see §12.2). Given the kind of creatures we are, and the objects we are suited to apprehend, this will not be an improvement: "It is better for the soul to be united to the body and to cognize intellectually by turning toward phantasms" (89.1c; see §12.3). Unlike angels, we are not well suited to receive pure intellectual inspiration. We need pictures.

We might have been smarter. God needs no pictures, of course; "God, through his single essence, understands all things" (89.1c). Angels, too, can understand even particular material things through their intellects (57.1–2). Human beings, in this life, have no such ability. Moreover, even if we had been allowed to cognize in angelic fashion, "we would not have a cognition that is complete, but confused and general" (89.1c). Even as things are, in our separated state we will largely be incapable of absorbing the information we will be illuminated by. Whereas the angels achieve a "specific and determinate understanding of each thing," our understand-

Face to face

At death our souls will be only temporarily separated from our bodies, and in the resurrected state we will again have all of our senses (see §12.4). But it does not seem that we will then have much if any need for turning toward phantasms – at least, the blessed will not. The vision of the divine essence in which our ultimate happiness consists will be a purely intellectual vision (1a2ae 3.3). Phantasms will be neither required nor helpful.

In light of the Treatise's insistence that the proper objects of intellect are "natures existing in bodily matter," one might well wonder how Aquinas can think it right for us to spend eternity contemplating God. It is satisfying to see that Aquinas keeps this very point in mind in 1a2ae 3.8c ("Does human happiness consist in a vision of the divine essence?"), where he explains that a vision of God is the culmination of our intellectual orientation. Since God is the first cause of the natural world, to understand God in full is to understand the created world as well.

ing will come "with generality and confusion" (*QDA* 18c; see §§10.4 and 10.5). We stand in the hierarchy of intelligent beings the way the dullest human beings stand in relation to the species as a whole. "To the ignorant and slow, one must explain each thing individually, using particular examples at every step" (*QDA* 18c). Some human beings are quicker than others, but as a species we are all in much the same position, the runt of our genus, dependent on examples to understand the way things work. If God had made us smarter, we would not need phantasms, or at least we would not need them so constantly. (What does it mean for one being to be smarter than another? See §§10.3–10.5. Why didn't God make *us* smarter? See the Epilogue.) If we had not been designed so as to have the natures of material things as our objects, we likewise would not need phantasms – or even a body at all. "The human soul has been united to a body so that it can receive intelligible species from material things" (*QDA* 18c). But given our mental capacities, and given the kinds of objects we are meant to understand, the most effective way for us to attain knowledge is to turn toward phantasms.¹⁶

This is the argument of 84.7 for the turn toward phantasms, fleshed out in certain details. That argument leaves unanswered some critical questions.

1. How is turning toward phantasms different from intellect's straightforward operations?

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2. Given that the intellect cannot apprehend particulars, what good does it do to turn toward phantasms?
3. Why is the turn toward phantasms always necessary?

Recent Aquinas scholars seem to have doubted that these questions can be given satisfactory answers. In particular, Bernard Lonergan and Norman Kretzmann have independently proposed understanding the turn toward phantasms not as an operation of intellect, but as merely an intellectual tendency. According to Lonergan (1967),

The conversion of possible intellect to phantasm is described by Aquinas neither as an activity nor as a shift in activity but as a natural orientation of human intellect in this life (p. 160).

Kretzmann (1993) also speaks of an “orientation.” It is, he says, “not something intellect has to do over and over again” (p. 142). To think of this as a literal turning around “suggests an effortful deviation on intellect’s part, and that is precisely wrong” (p. 156).

To understand the turn toward phantasms in this way deprives the theory of most of its interest and originality. Admittedly, this “orientation” account is attractive insofar as it offers a clear line of reply to all three of the above questions.

- Ad 1. The turn toward phantasms differs from intellect’s straight-forward operations in that it is not an operation at all.
- Ad 2. The turn toward phantasms is not a literal attempt to grasp the particular, but merely a tendency on intellect’s part to work in that direction.
- Ad 3. The turn toward phantasms is not a necessary activity at all, but simply a tendency.

Better answers are available. The turn toward phantasms is an activity, an activity that the intellect is constantly, necessarily engaged in, over and over.

1. *The operation.* With respect to the first question, we should concede that the turn toward phantasms does not describe some further, special operation that goes beyond the intellect’s ordinary activities of abstracting from phantasms and considering intelligible species. Still, this *conversio* is an operation: it is just the intellect’s standard and familiar operation. Even once the mind has grasped some fact, the intellect constantly returns to the phantasms, reinforcing its knowledge through further sensory data, reminding itself of what it already knows, supplementing its always shaky understanding with the confirming and reassuring evidence that the senses, memory, and imagination can provide. The human intellect, given its feeble nature, cannot rely on the intelligible species it has already acquired, but has to continue using phantasms to interpret its accumulated knowledge: “The possible human intellect needs a phantasm not only in order to acquire intelligible species, but also somehow to inspect those species in phantasms” (*InDMR* 2.97–101 (316)).

We turn toward phantasms as a way of shedding further light on the intelligible species we already possess. At this point the phantasm becomes the “instrument or foundation of its species. . . . In this phantasm the intelligible species shines like the exemplar in something exemplifying it, in its image” (*SCG* II.73.1523c). The senses remain crucial to intellect even after it has acquired the concepts it needs; those concepts have to be continuously reinforced in just the way that slow students need constant examples and illustrations, even with respect to things they already know.

The need for phantasms only partially arises out of our feeble intellectual state. Phantasms are also particularly well suited for our mode of cognition because of the kind of knowledge we want to have. In the case of both practical knowledge and the natural sciences, the ultimate aim of knowledge is to understand sensible particular things: “the natural philosopher seeks to cognize the nature of stone and horse only so as to know the characteristics of things seen by the senses” (84.8c). But this requires some sort of insight into sensible reality: “natural science cannot have a complete judgment about natural things if their sensible [features] are not known” (84.8c). Moreover, even someone hoping for abstract knowledge in a field such as mathematics, philosophy, or theology will depend on sensory images. Aquinas is willing to say, quite generally, that “all the things we intellectually cognize in our present state are cognized by us through a comparison to natural sensible things” (84.8c). This is true of the geometer, who conceives of particular shapes as a guide in working through a demonstration (*InDMR* 2.27–31 [312]). It is likewise true of the theologian, who must reach an understanding of God by treating God as the cause of what we can see, more excellent than sensible reality in all positive respects, removed from all negative respects (84.7 ad 3; 12.12c).

It is hard to see what this turn toward phantasms could be, if not just the intellect’s ordinary operation, now carried out as a way of exemplifying and portraying the knowledge we already possess. In the immediately preceding article, Aquinas announces without exception that “phantasms do not suffice to make an impression on the possible intellect; rather, they must be made actually intelligible through the agent intellect” (84.6c). Elsewhere, in response to Aristotle’s remark that phantasms stand to intellect as colors do to sight (*De an.* III 7, 431a14–15), Aquinas stresses that “phantasms are not the objects of intellect except insofar as they are made actually intelligible through the light of agent intellect” (*QDA* 15 ad 6). The turn to phantasms, then, is not some further, mysterious operation, nor is it a mere orientation. It is, instead, the usual operation of abstraction from phantasms, carried out in particular circumstances, for the special purpose I have been describing.

2. *Particulars.* This leads to the second question: how does the turn toward phantasms help the intellect to understand particulars? We have seen Aquinas say that the turn toward phantasms is necessary “so as to examine a universal nature existing in a particular” (84.7c); it is required, moreover, for “a complete judgment about natural things” in terms of their

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sensible features (84.8c). There may seem to be a kind of sleight-of-hand here, however, since the intellect itself “cannot directly and primarily cognize the singular in material things” (86.1c), and since phantasms are the object of intellect only insofar as they are made abstract and (hence) universal. How will turning toward phantasms, even for a second (or third . . .) time make it any more possible for intellect to grasp individuals?

The correct answer is that the turn toward phantasms does not directly allow intellect to grasp individuals – that is not its immediate purpose.¹⁷ Aquinas confronts this issue in the *De memoria* commentary.

It could seem unacceptable to someone that a human being cannot intellectually cognize without a phantasm. For a phantasm is a likeness of something bodily, whereas intellectual cognition is of universals that are abstracted from particulars (2.19–23).

Aristotle had offered the analogy of the geometer who sketches a specific triangle in the midst of his demonstration. “Although we make no use of the determinate quantity of the triangle, we nevertheless draw one with a determinate quantity” (*De mem.* 450a1–3). As the geometer uses a sketch, so we use our senses to form mental images. Aquinas, in light of Aristotle’s analogy, offers this example of the actual process at work:

Someone who wants to understand a human being has occur to him the imagination of a six-foot-tall human being; but the intellect understands the human being as a human being, not as having this quantity (*InDMR* 2.34–37 [312]).

Similarly,

when someone wants to understand a line, there occurs to him the phantasm of a two-foot line. But intellect understands it only with respect to the nature of quantity, not in respect of its being two feet long (2.44–47 [313]).

The point, then, is that the intellect turns toward phantasms as a way of grasping the universal natures of the particular thing depicted in the sensory image. Even once we have grasped the nature of lines and triangles, we still cannot help but think about these things in light of specific images. We literally cannot help it, because our intellects are too feeble to do anything else. (Again, God and the angels need no pictures.) Moreover, given that the proper objects of our intellect are the natures of sensible particulars, it is useful that we work in this way. By letting phantasms be our guide to the nature of the world, we are more likely to apprehend that world as it is.

Viewed in this way, the human process of thought again turns out to be a cooperative enterprise, with intellect and the senses working concurrently, in close collaboration. Often, the senses work at the behest of intellect: “the imagination, following the intellect’s command, forms a phantasm that is appropriate to such an intelligible species” (*SCG* II.73.1523c; see 2a2ae 173.2c). In such cases the intellect uses the senses like a sketch pad, working internally in the way that the geometer works

Pictures or sentences?

Aquinas seems to believe that thought is both pictorial and linguistic. On one hand, he believes that the intellect cannot actually understand anything without turning to phantasms. On the other hand, the intellect forms a mental word whenever it understands (see §10.5). The first constraint requires intellect to have recourse to image-like mental representations, whereas the second seems to give thought a language-like aspect.

These are the two dominant models that philosophers have used over the centuries in trying to understand the mind. It is interesting that Aquinas would attempt to combine them. But two questions must be distinguished: *how* do thoughts represent and *what* do they represent? Correspondingly, we must distinguish two levels: the *intrinsic nature* of the thought and the *content* of the thought. (To confuse these two questions, or these two levels, is to commit what I call the content fallacy. See §10.3.) Aquinas believes that, as far as content is concerned, the mind must have access to sensory images and must be able to form mental propositions. But this does not show anything about *how* the mind represents things. As far as the mind's intrinsic nature is concerned, it could represent the world through pictures, through a language of thought, or through neither one. Aquinas is far from definite on this point. (See Pasnau 1998, where I describe Aquinas as committed to some minimal version of the language-of-thought hypothesis, as an answer to the *how* question.)

with graph paper. Used in this way, phantasms become a kind of tool. The intellect is not simply dependent on whatever images come to mind, but plays an active role in deciding which images appear. When viewed in full, Aquinas's theory of cognition no longer appears to have various discrete modules, working in isolation. Instead, the whole works together. "A human being's natural manner of cognition is to cognize simultaneously through its mental power, intellect, and its bodily power, sense" (*In2Cor* 12.1). As befits a genuinely unified substance, the soul's various capacities and the body's various organs collaborate in seamless fashion.¹⁸

3. *The necessity.* It is not entirely clear just what Aquinas means when he says that the turn toward phantasms is necessary. Surely it is not necessary in the way that a fuse is necessary to complete a circuit. The intellect can in principle operate without turning toward phantasms. And we surely can have discrete thoughts that are free from any sensory exemplars. But Aquinas evidently thinks that our intellects never do function in this way for very long; if people could train themselves to do without phan-

tasms, the results would be not just meager but worthless. The only way to think without phantasms is to receive God's direct assistance, which is precisely what will take place after death (see §12.2). In this life our cognitive position is such that the intellect's activities are constantly accompanied by a parallel series of sensory activities. But of course the two do not run on wholly separate tracks. The intellect is constantly looking to see what the senses are doing, and is constantly instructing the internal senses on what to do next.

The case for this thesis has various metaphysical roots and offshoots, as we have now seen, but ultimately it rests on experience. Aquinas thinks it a matter of common experience that we cannot think without employing mental imagery. We cannot do geometry without picturing specific shapes, we cannot think about human beings without picturing an individual of a certain size (*InDMR* 2.19–47 [312–13], as quoted above). Consider this account of a mathematician's work:

Sometimes, a whole day would be consumed as I paced and sat and scribbled and stared at my symbols, head filled with pictures, shapes, movements, patterns, connections on the edge of perception and language that I'd be trying to coax or bully into some stable, and ultimately logical/communicable, form (Rotman 1997).

I take this to be precisely the phenomenon of turning toward phantasms.

Aquinas is not committed to our always forming a phantasm that represents a particular instance of the universal nature I am conceiving through intellect. He explicitly notes that we manage to think about incorporeal substances such as God and the angels in virtue of phantasms of the corporeal objects around us: "there are no phantasms of the incorporeal" (84.7 ad 3). And surely we use the same method in many other contexts: in thinking about a chiliagon, I do form a sensory image, but not the image of a chiliagon. We use phantasms in many different ways. Often, they are fleeting, and we commonly use them in ways that are quite ineffable. It is probably not possible to give a comprehensive analysis of all the ways we think through phantasms.¹⁹

Is the turn toward phantasms truly necessary? Sometimes it is hard to stop oneself from having a phantasm corresponding to the thought. If I am asked to describe the difference between a car and a bicycle, I cannot help but have the relevant mental images. But these are not the best sorts of cases to illustrate Aquinas's point, because in these cases the phantasms are not doing any real work. (I could describe bikes and cars without relying on any visual image.) The turn toward phantasms is a thesis not about what the mind does out of habit or compulsively, but what the mind needs to do in order to think effectively. And as I sit here, writing, it does not seem that this thesis is obviously true. My thoughts are often accompanied by fragments of English sentences, uttered by a kind of inner voice. (Indeed, it is tempting to say that my thoughts just are these inwardly spoken words and phrases.) Such inner tokens of language might count as

phantasms, but they seem rather far from Aquinas's notion that we use phantasms to exemplify and depict our thoughts.²⁰

In evaluating the alleged necessity of phantasms, we might consider whether they are required to answer the following questions:

- What is the difference between seraphim and cherubim?
- What is the difference between quarks and gluons?
- What is the difference between phantasms and intelligible species?

A quick and superficial answer to any of these questions might require no phantasms. I might simply reply, for example, that phantasms are mental representations at the sensory level, whereas intelligible species are mental representations at the level of intellect. But as soon as I try to spell out this answer in any detail, I find myself appealing to sensory images. I connect phantasms with memory and imagination, intelligible species with intellect; I place the agent intellect somewhere in between. I envisage a kind of mental map of the process, a schematic diagram that displays the causal relationships. So even if at first I seemed to be thinking without images, I didn't manage to get very far. And this is all that Aquinas wants to claim. He believes, as quoted earlier, that "all the things we understand in our present state are cognized by us through a comparison to natural sensible things" (84.8c). This is not to say that intellect makes such a comparison at every single step along the way, but only that successful thinking – among human beings – requires *continuous* comparisons of that kind.

This doctrine is endorsed, in a backward sort of way, by George Berkeley. In attacking the notion of abstract ideas, Berkeley famously remarks,

The idea of a man that I frame to myself must be either of a white, or a black, or a tawny, a straight, or a crooked, a tall, or a low, or a middle-sized man. I cannot by any effort of thought conceive the abstract idea above described (*Principles of Human Knowledge*, Introduction §10).

Like Aquinas, Berkeley believes that one's idea of a human being necessarily involves some particular sensory representation. Earlier we saw Aquinas use much the same example: "Someone who wants to understand a human being has occur to him the imagination of a six-foot-tall human being" (*InDMR* 2.34–35 (312)). Berkeley would have to agree, then, that all thought requires a phantasm. The difference is that Berkeley thinks there is no further idea beyond that phantasm. For Aquinas, in contrast, the sensory image is only part of the story. We not only visualize particular human beings, we also understand the nature common to all human beings. Such an abstract idea is not, of course, a sensory image, as Berkeley seems to have (rather crudely) supposed. For Aquinas the level of phantasms captures only part of our full cognitive process. Conceptual, intellectual thought is not itself conducted in images, but does constantly make use of images.

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If Berkeley means to deny that we have conceptual thoughts beyond the level of sensory images, he is surely making an implausible claim. But we might instead take him to be challenging us to explain just what these concepts are. Given Aquinas's sharp distinction between phantasms and conceptual thoughts, this is a challenge he should be able to meet. I consider this issue in the next chapter.

Mind and reality

The object of intellect is the quiddity or common nature of physical objects. Despite the metaphysical difficulties, Aquinas must locate these quiddities within particular material substances (§10.1). The intellect grasps the essential features of substances through information acquired from the senses, but Aquinas's empiricism is tempered by his appeal to a form of divine illumination (§10.2). Although the possible intellect starts out as a blank slate, the agent intellect reveals the natures of things through abstraction. On inspection, the role of agent intellect turns out to be obscure, and abstraction rather mysterious (§10.3). But a clear understanding of the different forms of universality shows how Aquinas's account is genuinely explanatory (§10.4). The main part of understanding takes place not in the agent intellect but in the possible intellect, through the long, hard process of reasoning (§10.5).

10.1. Quiddities

Aquinas's methodology – familiar by now – is to work from objects to actions, and from actions to capacities:

One must derive one's account of a capacity from the act at which it is directed. . . . But the account of an act differs according to how the account of its object differs (77.3c; see §6.2).

It is high time, then, to say something about the object of intellect. Surprisingly, the Treatise does not explicitly address this issue. As early as 75.2c, Aquinas can be found remarking, without any argument, that “through intellect a human being can have cognition of the natures of all bodies.” Likewise, 79.3c refers to “the natures or forms of sensible things, which are what we grasp through intellect. . . .” And in 84.7c, in arguing for the turn toward phantasms (§9.4), Aquinas says explicitly that “the human intellect . . . has as its proper object corporeal matter.” Such claims are simply asserted from time to time, without argument.

It may seem that Aquinas can take for granted that the intellect's proper object is the nature of the material world. Just as no argument was needed to establish that color is the proper object of sight, so perhaps no argument is needed in the intellect's case. Isn't the point just obvious? But we shouldn't grant this point so quickly. There are certain facts about the intellect that can plausibly be taken for granted: for example, that each one of

us is a thinking thing, and that the intellect is the capacity that allows us to think.¹ But Aquinas's account of the intellect's proper object is more controversial. The notion of a quiddity is too abstruse to be taken for granted, and it is far from obvious that these quiddities are "existing in corporeal matter." His thesis about the proper object of intellect therefore needs some defense.

The reason the Treatise itself doesn't argue for these claims is that the issue was handled back in 12.4c. There Aquinas contends that "the cognition of any cognitive agent occurs in keeping with the mode of its nature" (an application of the more general premise: "an agent's mode of action accords with the mode of its form" (84.1c)), and he proceeds to locate human nature halfway between that of other animals and that of the angels. Whereas other animals grasp only material particulars and the angels grasp immaterial natures, we human beings grasp the nature of material particulars. In making this claim, Aquinas reasons from facts about how human beings are constituted to facts about what their proper function should be. Unlike the angelic mind, the human mind is connected to a sensory system: this suggests that our mind has the physical (observable) world as its proper object. In contrast to other animals, the human mind is immaterial: this

What is our natural state?

Aquinas supposes that by studying the way human beings are, we can learn about how human beings ought to function. This holds true in ethics, and holds equally true in the present context, as regards the proper function of intellect. (In part, this reflects the teleological assumption, discussed in §6.2, that nature does nothing pointless or superfluous.) Aquinas further supposes that we can generalize from how our faculties are constituted in this life to what the ideal proper function of those faculties is. So the fact that the intellect relies on the senses in this life shows us something about the proper function of intellect. John Duns Scotus, among many others, would question this latter assumption. Scotus suggests that our current cognitive predicament might be a consequence of original sin, and that our present orientation (really, a limitation) might stem not from what is proper to us but from a divine punishment imposed long ago. Accordingly, Scotus argues that our intellect's present state is no guide to its proper function in general. The human intellect, he argues, has all being as its proper object: by nature, the intellect is capable of understanding anything that exists, from God through the angels down to the lowest individual material beings. See Scotus's *Ordinatio* I.3.1.3.

suggests that our mind must have common natures as its proper object. Aquinas infers, from these two facts, that the human mind's proper object is the nature of material things.

Aquinas presupposes this general framework in QQ84–86 when he takes up the intellect's cognition of "the bodily things that are below it" (84pr). Yet even if we accept this framework in general, many specific questions remain about what exactly the natures of material particulars are, and how the intellect manages to understand those natures. Aquinas takes up these issues at the start of Q84, where he asks a natural preliminary question: *Is it even true that the soul cognizes bodies through intellect?* The principal objection to an affirmative answer rests on the perceived incompatibility between intellect's objects and the character of corporeal things:

The intellect concerns things that are necessary and always disposed in the same way. But all bodies are moveable and not disposed in the same way. Therefore the soul cannot cognize bodies through intellect (84.1 obj. 3).

Corporeal things are movable – that is, changeable – whereas the objects of intellect are constant and necessary. This gap between mind and reality is, for Aquinas, the fundamental problem in understanding intellect; in one way or another, all of Q84 is devoted to it. (The turn toward phantasms (84.7; §9.4) can be viewed as one strategy for coping with the problem.)

But must the gap be bridged at all? In 84.1c, summarizing the history of debate on this topic, Aquinas considers two alternative routes. In his best proto-Hegelian manner, he describes how an extreme pre-Socratic position gave way to the contrary extreme of Plato, which was then superseded by an Aristotelian synthesis. The earliest natural philosophers had been materialists who "believed that there is nothing in the world beyond bodies" (84.1c; §1.2). Given that such bodies are "in constant flux," these ancients "judged that we could have no certainty about the truth of things." Such claims forced the ancients to give a negative answer to the question posed by the article ("Does the soul cognize bodies through intellect?"). Bodies that are in constant flux cannot, as such, be the objects of intellect. So if that is all there is in the world, then on this pre-Socratic account there could be no objects for intellect to apprehend, and so no role for intellect. In short, the ancient materialists would avoid the gap between mind and reality by denying the mind any legitimate operation. No wonder, then, that some of the ancients were supposed to have entirely denied the distinction between sense and intellect (84.6c; see *De an.* III 3, 427a17–29). For these ancients, there would have been no grounds for that distinction.

The ancient materialists inspired Plato to think more deeply about these matters. Aquinas takes Plato to have offered a kind of detour, one that would preserve a role for the intellect by ensuring that "our intellect has certain cognition of the truth" (84.1c). The proposal, of course, was to establish a realm of "immaterial and separate" Forms or Ideas. This would

be to bridge the gap upstream: rather than build a bridge between mind and sensible reality, Plato is said to have postulated a different kind of reality, a world of “immaterial and separate Ideas.” His detour is attractive in that it recognizes and tries to account for the nature of intellect’s operation: that it “cognizes universally, in a way that is somehow necessary” (84.1c). By postulating a realm of universal and necessary objects, Plato holds out the hope of explaining the intellect’s operation without having to bridge the gap between mind and the sensible world.

As a result of shifting the intellect’s focus in this way, Plato will have to build bridges of a different sort. How, for instance, can we know anything about this separate realm of Ideas? (We will see in §10.2 how Aquinas rejects innate ideas.) The proposal is attractive, Aquinas concedes, inasmuch as it recognizes the universality and necessity of intellect’s judgments. Yet the cost of Plato’s proposal is substantial. Aquinas takes it to be a consequence of the proposal that

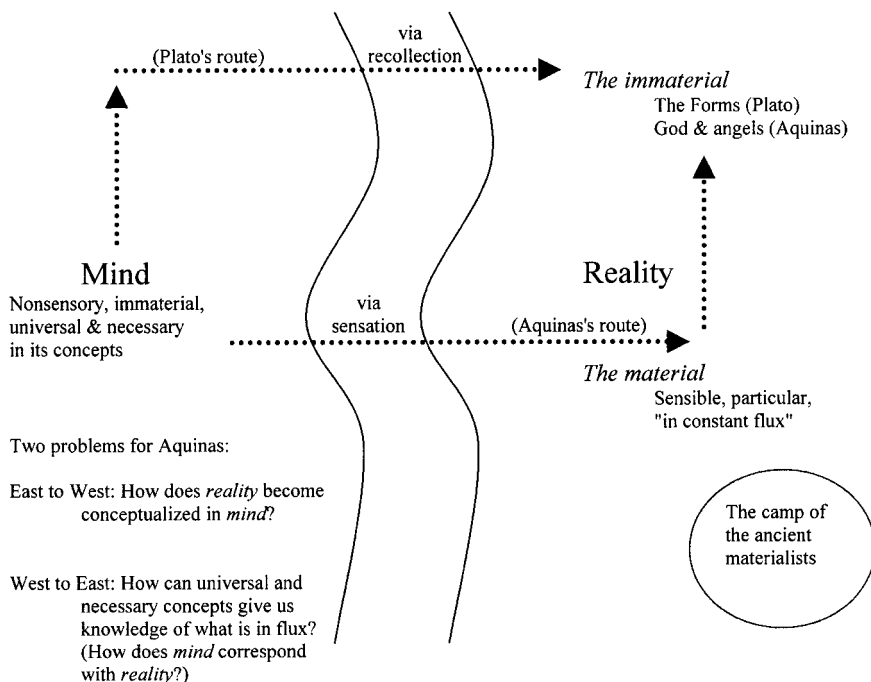
the sciences, definitions, and whatever pertains to the act of intellect refer not to sensible bodies, but to those immaterial and separate Ideas, so that in this way the soul intellectually cognizes not those corporeal things, but the separate species of corporeal things (84.1c).

This would be the end of natural science, Aquinas argues, because natural science has motion and matter as its subject; moreover, it would make impossible any “judgment about sensible things,” because knowledge about these separate Ideas would not show us anything about sensible reality.

Rather than look into the merits of these charges, which would require an attempt to reconstruct the theory of Forms along lines much more sympathetic than those Aquinas suggests, I want to focus on the pressures, both epistemic and ontological, that made this Platonic detour seem at all tempting. From the epistemic perspective, Aquinas faces a question about how we manage to construct or discover universal, necessary concepts, given a sensible reality that is “in constant flux.” This is the chief difficulty posed by the gap between mind and reality, the problem of conceptualization: how does *reality* become conceptualized in *mind*? To solve this first problem, Aquinas has to deal with a further epistemic difficulty, the problem of how concepts that are universal and necessary can count as knowledge of objects that are neither universal nor necessary. This problem runs in the other direction: how does what is in the *mind* correspond with *reality*?

Aquinas is committed to correspondence: “for the truth of a cognition, it is necessary that the cognition correspond to the thing” (SCG II.75.1551; see 85.1 obj. 1). He will not take the easy way out, by denying that the truth or veridicality of cognition requires correspondence between mind and reality. The object of intellect is “the nature of the species” (85.1 ad 1), “the nature or quiddity of the thing” (*De unitate* 5.188 [256]). Such natures or quiddities exist in sensible particulars:

10. MIND AND REALITY



Intellect's proper object is a thing's quiddity, which is not separated from things, as the Platonists claimed. As a result, our intellect's object is not something existing outside sensible things, as the Platonists claimed, but something existing in sensible things (*InDA* III.8.240–45).

Mind corresponds with reality, then, inasmuch as the mind grasps these quiddities.

How does the mind manage to conceptualize in that way? The intellect operates "by means of a cognition that is immaterial, universal, and necessary" (84.1c). This is achieved by focusing only on the thing's nature or quiddity, ignoring its particular characteristics:

But intellect apprehends the quiddities of things differently from how they are in sensible things. For it does not apprehend them with the individuating conditions that are adjoined to them in sensible things (*InDA* III.8.245–49).

To focus on the thing's nature in this way, putting to one side its individual characteristics, just is for the intellect to cognize universals (*SCG* II.75.1551). Of course, this process of abstraction needs considerable articulation and defense (see §10.3). But once we postulate that "the quiddities of things" are actually found within objects, Aquinas can readily state

what abstraction consists in. Rather than an obscure process of conceptualization and interpretation, abstraction becomes merely a matter of separating the necessary wheat from the accidental chaff, of carving up an object at its metaphysical joints.

Once conceptualization is characterized in this way, it is easy for Aquinas to show why the intellect's grasp of reality is not distorted. Rather than distorted, the intellect is simply selective. Just as there would be nothing objectionable in considering the color of an apple without thinking about the apple, so the nature of a thing can be considered without the distinctive features of the individual. There is nothing false in this, unless one wrongly insists (à la Democritus (see §6.3)) that the color is not part of the apple, or (à la Plato) that the thing's nature is separate from the thing (see 85.1 ad 1).

By resolving the epistemological issues in this way, Aquinas makes ontological trouble for himself – specifically, trouble over universals. His theory of universals is of course neither Platonist nor nominalist. Nor does he defend what is known as immanent realism, the view that universals exist within material particular objects. Universal natures, for Aquinas, exist only within intellect. Outside of intellect, there are no natures that exist in more than one individual. But this is not a form of nominalism, because Aquinas insists that the natures conceived of in intellect do exist in the material world, as the individual forms of particular entities: “Universals, inasmuch as they are universal, exist only in the soul. But the natures to which the conception [*intentio*] of universality applies exist in things” (*InDA* II.12.144–47). So although *universal* natures exist only in intellect, still those natures do exist in particulars, where they are individuated by the distinctive characteristics of the object to which they are attached.²

This commitment to common natures *in rebus* is a crucial plank in Aquinas's bridge between mind and reality:

Although the nature of the genus and species is present only in individuals, nevertheless the intellect cognizes the nature of the species and genus without cognizing the individuating principles, and this is for intellect to cognize universals. That is why it is not a contradiction that universals do not subsist outside the soul, and that the intellect, in cognizing universals, cognizes things that are outside the soul (*SCG* II.75.1551).

There is no contradiction, because the natures apprehended by intellect are the necessary, unchanging core of external particulars. Such common natures are not constructed by mind. They exist in reality, accessible through a process of stripping away the object's contingent, accidental features. Beneath the accidents lies a common kernel, the quiddity of the object, qualitatively the same from object to object even if it is not numerically the same. Both the veridicality of intellect and the feasibility of abstraction rest on this metaphysics.

In this way, progress in epistemology breeds problems in ontology. A bridge between mind and reality must be moored on the far side to necessary and unchanging truths, to mysterious common natures. The problems here are too numerous and deep to be resolved in this study, and one might worry that this instability at the metaphysical foundations will undermine his theory of intellect. (One might, indeed, fear that it undermines his entire project; the Treatise's express aim, after all, is to study one such mysterious entity, human nature (see §In.3).) Even so, it seems reasonable to hold these metaphysical questions at bay for now, and to take an ecumenical approach to the underlying metaphysics. I shall take for granted, then, that Aquinas is entitled to his basic ontological scheme.

10.2. Empiricism and illumination

Q84's official subject is the means through which the intellect apprehends bodies (84pr). In §10.1, I briefly considered the metaphysical underpinnings of this account. Contrary to appearances, the necessary and unchanging character of intellective cognition has as its counterpart the necessary and unchanging essences of bodies. Yet the very fact that this discovery is contrary to appearances poses a puzzle for Aquinas, because the eventual conclusion of Q84 is that the intellect gets at these unchanging essences *through appearances*. So we should now turn to consider the scope and force of Aquinas's empiricism.

In aa2–5, Aquinas rules out various nonempiricist shortcuts, reaching the following conclusions:

- Intellect does not cognize bodies through its own essence (a2; see §11.1)
- Intellect does not have naturally innate species (a3)
- Intellect is not given species by any separated forms (a4)
- Intellect does not acquire knowledge through divine ideas (a5).

This leaves him free, in aa6–8, to conclude that “the source of our cognition comes from the senses” (84.6sc), and that “all the things we intellectually cognize in our present state are cognized by us through a comparison to natural sensible things” (84.8c). The same fundamental concern drives each article of Q84: How does the intellect manage to derive universal and unchanging knowledge from appearances that are in constant flux? (This is, again, the problem of §10.1 from right to left.)

The theme of aa3–5 is the possibility of the intellect's being aided by some outside influence – either God or some separated intelligence. According to Plato, such aid is given innately: “the human intellect is naturally filled with all intelligible species” (84.3c). On Plato's view, as Aquinas describes it, the soul is filled with likenesses of separated Forms, acquired by participating in these Forms: “just as he claimed that sensible forms that are in corporeal matter emanate from Ideas as likenesses of them, so he claimed that the intelligible species of our intellect are like-

nesses of the Ideas from which they emanate." Whatever the details of this participation or emanation, it clearly is not a product of sensation. For it occurs even before the soul is united with its sensory organs.³

Avicenna rejected an ontology of separated Forms, and accordingly rejected the innate knowledge that those Forms allegedly make possible. On this view, knowledge flows into the soul from a separated agent intelligence. Like Plato, then, Avicenna held that "the intelligible species of our intellect emanate from certain separated forms" (84.4c). But, unlike Plato, Avicenna denied that species are innate to our souls. Moreover, these species do not even remain within the human intellect, once a particular act of thought is finished. To think the same thought again, our intellect needs to turn again toward the separated agent intelligence that illuminates our thoughts (84.4c; 79.6c).

Aquinas makes easy work of both these theories, by casting them in their most extreme forms. The question of 84.3 is whether the species of *all* intelligible things are innate (84pr). When the thesis is cast in this form, it is relatively easy for Aquinas to reply that (1) surely the soul wouldn't have forgotten having had that much knowledge, and (2) on this view it would be possible, absurdly, for someone born blind to have knowledge of color (84.3c). In 84.4 the scope of the opponent's thesis is never made quite so explicit; it is nowhere proposed that *all* intelligible species might emanate from separated forms or intelligences. Nevertheless this is clearly how Aquinas understands the proposal. The *sed contra* recycles his "What can the blind man know?" argument from the previous article, which is effective only if we suppose that emanation would account for all intellectual cognition, even cognition of sensible qualities. Likewise, the body of the article concludes that "it would be pointless for the soul to be united to a body" – but that holds only on the assumption that the soul does not receive *any* information from the senses. Aquinas goes on to consider several ways in which the senses might be useful in exciting the intellect to attend to this higher source of knowledge; elsewhere he discusses the Platonic view (e.g., *Phaedo* 73b–77a) that the senses might help the intellect recollect what it once knew (see 117.1c, *QDV* 10.6c). But none of these views gives the senses, and therefore the body, the sort of essential role that would justify its union with the soul.

The arguments of 84.3–4, if successful, establish at most a weak empiricism: our intellect does not have all of its knowledge innately, and does not receive all of its information from separate forms or intelligences. It may seem that Aquinas wants a much stronger conclusion. He endorses Aristotle's description of the intellect as "like a tablet on which nothing has been written" (84.3sc). Shortly he will be replying in the affirmative to the question, "Is intellectual cognition taken from sensible things?" (84.6). Elsewhere he goes so far as to write that "the whole of our intellect's cognition is derived from the senses" (*InDT* 1.3c). This may suggest that Aquinas wants not just to deny the thesis of aa3–4, but actually to

assert their contrary: that *no* knowledge is innate or received from above,⁴ and that *all* knowledge comes from the senses. It may seem, in other words, as if Aquinas is a full-blown empiricist.

Not so. The conclusion of 84.6c is that the senses are not "the whole and complete cause of intellectual cognition." The senses provide merely the raw material, a contribution which is useless by itself, since that sensory material "must be made actually intelligible through the agent intellect" (84.6c). To understand the extent of Aquinas's empiricism, then, we must understand the pivotal role of the agent intellect. That, in turn, requires that we come to terms with 84.5, where Aquinas offers his interpretation of the famous Augustinian doctrine of divine illumination.

If 76.1 is the linchpin of the Treatise (see §5.4), 84.5 is its most enigmatic, Janus-faced article. From one vantage point, 84.5 belongs with aa2-4, in that it rejects an unacceptable version of illumination as inconsistent with Aquinas's empiricism. It is easy to focus on this negative aspect, ignoring the fact that the conclusion here, unlike in aa2-4, is affirmative: "The intellectual soul cognizes all true things in their eternal natures" (84.5sc). Often this affirmative conclusion gets treated as little more than lip-service to the authority of Augustine, and the article as a whole gets taken as a backhanded repudiation of illumination theory: affirming the theory in form but denying it in substance.⁵ This is a misreading. Aquinas sees something important in Augustine's theory, something worth preserving. And once one begins to stress the article's affirmative aspect, it becomes apparent that Aquinas is taking the first constructive step here toward answering the central problem of Q84: How does the intellect grasp the natures of bodies?

Augustine is described in 84.5c as a man "drenched in Platonic teachings." Given the generally negative treatment that Plato receives in the Treatise, this is disconcerting, and it helps matters only slightly to be told that Augustine took up these Platonic teachings only insofar as they could be reconciled with Christian doctrine. We learn that Augustine replaced Plato's Forms with the divine ideas, and maintained that "in virtue of these all things are formed and in virtue of these the human soul has cognition of all things" (84.5c). Aquinas describes Augustine even as appealing to the language of participation: "through their participation our intellect cognizes all things" (84.5c). Still, despite the Platonic influence, and the similarities in language, Aquinas's Augustine remains thoroughly distinct from Aquinas's Plato. Aquinas is convinced that Augustine stops short of Platonism in two crucial respects. First, these eternal natures are not themselves cognized; they are a source of cognition, not an object of cognition. If they were the object of our cognition, we would be leading the lives of the blessed in heaven, "seeing God and seeing all things in God" (84.5c). But, clearly, Augustine credits us with no such capacity in this life. The second crucial difference between Augustine and the Platonists is that Augustine recognizes the essential role of the senses. Whereas "the Platonists held that solely participating in the Ideas suffices for having

knowledge,” Augustine recognized that “we do not have knowledge of material things solely through participation in their eternal natures” (84.5c). Participating in the eternal natures does not, in Platonic fashion, fill our soul with all intelligible species (84.3c), but merely gives us an intellectual light of our own, which is itself “a certain likeness of the uncreated light, obtained through participation” (84.5c).

Many of Aquinas’s early adversaries noticed only the negative aspect of Aquinas’s claims about divine illumination. Roger Marston (c. 1235–1303) spoke of those who, “drunk on the nectar of philosophy . . . twisted toward their own sense all of Augustine’s authoritative texts on the unchanging light and the eternal rules” (*De anima* 3 ad 30 (p. 273)). Viewed only in the light of 84.5, it is not clear why there should have been such hostility. The view that Aquinas here rejects is one that was universally rejected at the time: no one held that human beings in this life have the divine ideas as an object of cognition. Moreover, everyone agreed that divine illumination is not sufficient on its own, without the senses.⁶ Still, Aquinas would be controversial because he understands divine illumination to have occurred at the time when the soul was created. Others, in contrast, would argue for a *special* illumination, an ongoing influence from above, constantly required for the intellect’s operation. From one perspective this introduces an important difference between Aquinas and his opponents. According to Henry of Ghent, for example:

It should be said unconditionally, therefore, that there is nothing a human being can have pure truth about by acquiring knowledge of it through purely natural means. Such truth can be had only through the divine light’s illumination (*Summa* 1.2 [f.8rM]).

Aquinas, in contrast, is able to hold that

Just as other natural active capacities, when connected to their passive counterparts, suffice for their natural operations, so also the soul, which has within itself an active and a passive capacity, suffices for the perception of the truth (*InDT* 1.1c).

It is not that Aquinas denies God’s influence, merely that he thinks this influence does its part at the outset, furnishing human beings with a sufficient capacity for thought on their own, without the need for any “new illumination added onto their natural illumination” (1a2ae 109.1c). It is this step toward naturalism that Aquinas’s opponents would find so objectionable. Thus Marston decries his opponents for holding that “we see all things in the first truth because we see in a light derived from that truth – namely, in the natural light of our mind, which is part of the soul” (*De anima* 3 resp. (pp. 252–53)).

Then, as now, battles in the philosophy of mind were waged under the standard of *naturalism* (see p. 202). Aquinas stresses our innate, natural capacity for thought and knowledge; Marston condemns Aquinas for taking God out of the picture. It is easy to see how, at the time, this debate might have seemed important. But in retrospect it is striking how slight

the difference really is. Aquinas has of course not taken God out of the picture. Marston et al. agree with Aquinas that intellective cognition is incomplete without some sort of supernaturally infused insight. The only difference is that Aquinas wants that insight to be given all at once, from the start – bottled up within agent intellect, as we might think of it. His opponents, in contrast, think of illumination as an ongoing process, as necessary as the air we breathe. Marston takes this illumination to be constantly present to us, so that we can use it whenever we wish (*De anima* 3 ad 10 (p. 267)). Where then does their disagreement lie? They seem to be arguing simply over the means of transmission. Aquinas conceives of the illumination as a deep well within us, whereas Marston conceives of it as raining down in drops. Look at how Marston describes his view:

It is necessary to posit in our mind, beyond the phantasms or abstracted species, something by which we to some degree attain the unchanging truths. I believe this to be no different than the influence of the eternal light. . . . For the eternal light, irradiating the human mind, makes a certain active impression on it, from which a certain passive impression is left in it, which is the formal principle of cognizing the unchanging truths (3 resp. (p. 263)).

Then compare it to Aquinas:

It is necessary to say that the human soul cognizes all things in their eternal natures, through participating in which we cognize all things. For the intellectual light that is in us is nothing other than a certain likeness of the uncreated light, obtained through participation, in which the eternal natures are contained. Thus it is said in Psalm 4, *Many say, Who shows us good things?* To this question the Psalmist replies, saying *The light of your face, Lord, is imprinted upon us.* This is as if to say, through that seal of the divine light on us, all things are demonstrated to us (84.5c).

These men have much more in common than Marston's angry rhetoric suggests.

But perhaps I am letting myself be seduced by just one aspect of 84.5. For there is, once again, another side to Aquinas's account. Although he agrees that the mind's operation requires a divine light, he is willing to say much the same thing about all of nature, and he sometimes suggests that the intellect needs illumination only to the extent that the rest of nature does as well. For instance,

All active created powers operate in virtue of being directed and moved by the Creator. So it is, then, that in all cognition of the truth, the human mind needs the divine operation. But in the case of things cognized naturally it does not need any new light, but only divine movement and direction . . . (*InDT* 1.1c).

Here there seems to be nothing special about the intellect's need for illumination. The intellect, like all of nature, needs God as its first mover. If you like, think of this as divine illumination. But viewed under this aspect, it is no wonder the theory was controversial. Marston and others were

insisting on a special role for God in human cognition. Aquinas seems to have pushed his account of intellect as far in the direction of naturalism as his theism would permit.

This reading, I again want to suggest, is a misreading. It is true that Aquinas wants to explain the mind by using the same principles that he uses for all of nature; this is one of the hallmarks of his thought. But given the central role that God plays in all of nature, that hardly counts as diminishing God's role in cognition. The conclusion of 84.5 is affirmative, not just in form but in function. It represents Q84's first step toward a positive account of how the soul intellectually cognizes bodies. In 84.5, I now want to show, Aquinas intends nothing less than to affirm Augustine's theory and place it at the very heart of his own account of intellectual cognition.

Aquinas's commitment to divine illumination is a consequence of the way he understands the opening words of Aristotle's *Posterior Analytics*:

What is in potentiality is reduced to actuality only by something that is in actuality. So too, someone is brought from potentially knowing to actually knowing, whether by discovering or by being taught, only on the basis of some actually pre-existing knowledge. For, as is said in *Posterior Analytics* I, "all intellectual teaching and learning is brought about through pre-existing cognition" (*InDA* III.10.185–192).

Aquinas takes this to entail that knowledge cannot start up *ex nihilo*, and that the human intellect, if left unaided, would be incapable of having any knowledge. But the human intellect is never left unaided: "knowledge is acquired in a human being both from an internal source (such as someone who acquires knowledge for himself by discovery) and from an external source (such as someone who is taught)" (117.1c). Aquinas discusses the process of teaching in detail: he says that a teacher always leads students from what they know to what they don't know (117.1c; *SCG* II.75.1558). Teaching, in other words, presupposes that students know something, which in turn requires that students have some capacity for discovery on their own. This is possible, Aquinas holds, because each of us possesses an internal light:

Within every human being there is a source of knowledge, the light of agent intellect, through which the universal principles of all knowledge are naturally cognized right from the start (117.1c).

Human beings have an immediate and direct grasp of the truth of first principles such as the principle of noncontradiction (*SCG* II.83.1678).⁷ We do not infer the truth of this principle, we do not discover that it is true through any kind of induction. Instead we simply see its truth, as soon as we are confronted with an instance where it applies.

This is not innate knowledge; we are not born knowing these principles. What we are born with is the capacity to recognize their truth as soon as we are confronted with instances of them:

Unless we had perceived with the senses something that is a whole, we could not have intellectually cognized that the whole is greater than its part – just as someone born blind could not perceive colors (*SCG* II.83.1679).

In this way, Aquinas can still deny that we have innate knowledge. But on his view we must possess the innate capacity to see the truth of certain principles. If our mind were entirely blank, our education could never begin. (Accordingly, Aquinas stresses that the *De anima*'s blank slate analogy (403a1) applies only to the possible intellect (*InDA* III.9.39–60, III.10.128–66).) These first natural conceptions are “the seeds of all the things that are subsequently cognized” (*QDV* 11.1 ad 5). In this sense, Aquinas is even willing to speak of the soul's having a prior knowledge of everything that it knows:

The soul forms in itself likenesses of things inasmuch as, through the light of agent intellect, forms abstracted from sensible objects are made actually intelligible, so as to be capable of being received in the possible intellect. *And so, in a way, all knowledge is imparted to us at the start*, in the light of agent intellect, mediated by the universal concepts that are cognized at once by the light of agent intellect. Through these concepts, as through universal principles, we make judgments about

Ethical foundationalism

Recent scholars have debated whether Aquinas should be classified as a foundationalist: someone who believes that all knowledge must be derived from a smaller set of basic principles. (See MacDonald 1993 for the affirmative, and the reply by Jenkins 1997, pp. 215–19.) Perhaps the clearest indication that this is Aquinas's view comes in his discussion of synderesis, our innate disposition to know the first principles of moral reasoning (for a thumbnail sketch see 79.12 and §8.3). Synderesis supplies the moral equivalent of the theoretical first principles under discussion in this chapter. In each case, we possess these principles in virtue of the light of agent intellect (II *SENT* 24.2.3c). Synderesis must be absolutely infallible, if we are to have any moral knowledge at all:

Every speculative cognition is derived from some entirely certain cognition with respect to which there can be no error. This is the cognition of the first universal principles, relative to which everything else that is cognized is examined, and from which everything true is accepted, and everything false rejected. If someone *could* err in these, then no certainty would be found in any subsequent cognition (*QDV* 16.2c).

Could one ask for a clearer or more dramatic statement of foundationalism?

other things, and in these universal concepts we have a prior cognition of those others. In this connection there is truth in the view that the things we learn, we already had knowledge of (*QDV* 10.6c).⁸

In a way, Plato was right: we do have what amounts to innate knowledge. And since all of what we know can be traced back to these fundamental principles and “universal concepts,” there is a sense in which everything we learn, we already knew. (In this same sense, the conclusion of a valid argument is contained in its premises.)

So much for empiricism. All knowledge, including our most basic concepts and our knowledge of first principles, is derived from the senses. But only in part. An innate grasp of certain basic concepts and principles, recognized by the light of agent intellect, plays a crucial, foundational role. So much, too, for naturalism. The light of agent intellect is of course given to us from God – “a certain likeness of the uncreated light, obtained through participation” (84.5c). Without appealing to God, Aquinas sees no way of explaining how we acquire our most basic concepts and recognize the truth of first principles. Neither deductive nor inductive reasoning can account for how we immediately *see* that such principles are true. This insight is simply something we are given:

The light of this kind of reason, by which principles of this kind are known to us, is imparted to us from God. It is like a likeness of the uncreated truth reflecting in us. So, since no human teaching can be effective except in virtue of that light, it is clear that it is God alone who internally and principally teaches us (*QDV* 11.1c).

The light of agent intellect, a likeness of the divine ideas, is the essential starting-point for all knowledge. This is the epistemological context for Aquinas’s famous words, *Non nisi te*.

Aquinas represents the end of a long tradition in Western philosophy. All the great philosophers, until the end of the thirteenth century, had seen no way to explain the workings of mind without appealing to the supernatural. Socrates had his “divine sign” (*Apology* 31d). Plato, to explain our knowledge of Forms, postulated recollection from a past life (*Phaedo* 72e–77a). Aristotle, in turn, introduced a soul that is “immortal and eternal” (*De an.* III 5, 430a23). Much later, Avicenna would speak of emanations from a separate agent intelligence (*Liber de anima* V.5–6; see 84.4c). The fundamental motivation for all of this was stated most memorably by Augustine, in a passage that Aquinas prominently quotes at 84.5sc:

If we both see that what you say is true, and we both see that what I say is true, then where do we see that? Not I in you, nor you in me, but both of us in that unalterable truth that is above our minds (*Confessions* XII.xxv.35).

None of the great figures of ancient and medieval philosophy could see any way of answering such questions without appealing to something supernatural – no one, at least, until the end of the thirteenth century, when

John Duns Scotus would propose a thoroughly naturalistic account of the workings of the mind. On Scotus's account, when we grasp some conceptual truth, nothing miraculous or divine happens within us: "the terms, once apprehended and put together, are naturally suited to cause an awareness of how the proposition conforms with its terms" (*Ordinatio* I.3.1.4 n.269).⁹ Scotus, of course, believes that the human mind is created by God, but he differs from Aquinas in putting no weight on any kind of illumination, innate or acquired. It is not that *we* are illuminated by the divine light, as Aquinas joined the Augustinian tradition in believing, but that the truth we grasp is illuminated. Thanks to God, our world is intelligible. Scotus's thoroughly naturalistic account of the human intellect represents a turning-point in the history of philosophy. Viewed from this perspective, Aquinas marks the end of the first chapter in the history of the philosophy of mind.

10.3. Abstraction

The previous section established that the agent intellect plays a foundational role in intellectual cognition. Through it, human beings possess the innate insight to grasp the truth of first principles. Through these first principles, in turn, human beings advance to a still wider sphere of knowledge.

Agent intellect also accounts for our acquisition of universal concepts, and the Treatise appeals to this function in arguing for the existence of an agent intellect:

But because Aristotle [unlike Plato] did not claim that the forms of natural things subsist without matter, and because forms existing in matter are not actually intelligible, it followed that the natures or forms of sensible things, which are what we intellectually cognize, are not actually intelligible. But nothing is brought from potentiality to actuality except through something that is actual – as the senses are actualized by something actually sensible. Therefore he needed to postulate a power on the part of intellect that would actualize intelligible things by abstracting the species from material conditions. And this is the necessity in positing an agent intellect (79.3c).

Aquinas makes no mention here of the need to grasp the truth of first principles. Instead, an agent intellect is required to grasp the natures of sensible things. The argument is quite simple:

1. The objects of intellect (the natures of sensible things) are not actually intelligible.
2. Nothing is made actual except through something that is actual.
- ∴ 3. There must be a power on the part of the intellect that actualizes intelligible things by abstracting the species from material conditions.

There are two gaps here. First, Aquinas assumes that the intellect is (at least sometimes) successful in grasping its objects; one might just as well

Agent sense

Aquinas's method for establishing the existence of agent intellect remains a very common form of reasoning about the mind. On the basis of gaps between the character of the input and the character of the cognition, we infer the existence of transformational capacities.

For example, we now know that the eyeball is constantly moving about, in tiny jerks, even when it seems stationary. This means that the retinal image is never completely stable. But we see stable images. Therefore there must be some sensory capacity that stabilizes visual experience. (Is this our agent sense?)

The example illustrates how cautiously such arguments must be employed. As it turns out, the visual system does not simply *adjust* for the shaky retinal image, as one might assume, but actually needs the image to be shaky, for proper perception to occur. If your eyeball were to freeze (or if the world were made to jerk about in exact harmony with your eye), you would quickly experience great difficulty in seeing anything. (See Gregory 1987, pp. 682–84.)

Aquinas himself shows no signs of applying this method to the senses: he not only refuses to postulate an agent sense, but he falsely supposes that the senses are entirely passive in their acquisition of information. (See 79.3 ad 1 and my discussion in *Theories* ch. 4.)

reject the conclusion and embrace skepticism. Second, the conclusion is intentionally vague about where this agent intellect is located. It will take Aquinas some more work to establish that the agent intellect is a part of the soul (79.4) and that each of us has our own agent intellect (79.5). These were enormously controversial questions in Aquinas's own day. Still, I want to put these matters to one side, and focus on what the argument claims: If intellect does grasp its objects, then there must be some agent on hand enabling it to do so. The intellect cannot simply acquire its information passively.

Agent intellect makes the natures of things actually intelligible, something it does “by abstracting the species from material conditions” (79.3c, as above). This means that the agent intellect gets at the natures of material objects by abstracting away the individuating material features of those objects, leaving behind only the object's nature. Platonists think that such species subsist in this way on their own, apart from the individuals. Hence the Platonist doesn't need an agent intellect (79.3c, *QDSC* 9c). But the Aristotelian needs some kind of capacity by means of which the likenesses that are in phantasms “are abstracted from individuating material conditions, as a result of which they are made actually intelligible” (*SCG*

II.77.1582). This process of abstraction is so crucial that Aquinas attributes "the dominant role in the action" not to the phantasms but to the agent intellect (*ibid.*). The senses supply solely "the material of the cause" (84.6c).

What is this process of abstraction? We might begin by asking why "forms existing in matter are not actually intelligible" (79.3c). There seem to be two answers. First, phantasms (= forms existing in matter) are not intelligible because they are particular:

Because within the sensory capacities the forms of things are particular, as was said, they are not actually intelligible, but only potentially. For the intellect cognizes only universals (*CT* I.83 [144]).

In saying that forms in the senses are particular, Aquinas might mean that (i) each represents a particular thing; and/or that (ii) each is itself particular rather than universal. This is easy to disambiguate, because Aquinas believes that *everything* is particular in sense (ii). In this sense there are no universals. (Even the intelligible species produced by agent intellect are particulars; they are universals only inasmuch as they stand for more than one individual.) So Aquinas must mean here that each phantasm (sensory form) *represents* a particular thing, rather than representing the universal features of an object (and hence standing for more than one individual). Since "the intellect cognizes only universals," phantasms are not actually intelligible.

Viewed in this light, the agent intellect provides crucial support to the bridge between mind and reality (§10.1), accounting for how "in intellect, the species of bodies, which are material and moveable, are received immaterially and immovably" (84.1c). These species are received *immaterially*, in the sense that the intellect pays no attention to the individuating material conditions that distinguish one member of a species from another. They are received *immovably*, in the sense that the species (nature, quiddity) that remains is a necessary feature of any instance of that species. Socrates' accidents may change, but his nature does not, and it is his nature that intellect focuses on, in virtue of agent intellect's abstractive capacity: "the agent intellect causes the universal by abstracting from matter" (79.5 ad 2).

In 84.6c, Aquinas offers a second way of understanding why phantasms are not actually intelligible:

Aristotle claimed that intellect, in contrast, has an operation that it does not share with the body. But nothing corporeal can make an impression on something incorporeal. And so in order to cause the operation of intellect, it is not enough, on Aristotle's view, to have the impression of sensible bodies. Instead, something loftier is required. . . . That higher and loftier agent, which is called the agent intellect, . . . makes phantasms drawn from the senses be actually intelligible, by way of a certain abstraction (84.6c).

Here no mention is made of the gap between particular, changeable sensory cognition and universal, necessary intellectual cognition. Another gap is at issue here, the gap between the corporeal and the incorporeal. It is axiomatic, for Aquinas, that “nothing corporeal can make an impression on something incorporeal” (as above). As a result, phantasms are not intelligible because they are the forms of bodily organs, and therefore not candidates for making an impression on the possible intellect. It is the role of the agent intellect, accordingly, to bridge the gap between the corporeal and the incorporeal, by converting the physical into the nonphysical: “phantasms are not sufficient to make an impression on the possible intellect, but must be made actually intelligible through the agent intellect” (84.6c).

So what does the agent intellect do? What is abstraction? There seem to be two quite distinct functions:

- (i) To transform the *intentional* character of a phantasm by taking its representation of a material particular and making an intelligible species that represents universally.
- (ii) To transform the *intrinsic, ontological* character of a phantasm by making incorporeal species out of corporeal phantasms.

We can readily see why Aquinas would postulate the existence of powers to perform both of these functions: (i) helps bridge the gap between mind and reality; (ii) is required by the prohibition against the corporeal acting on the incorporeal. There is nothing obviously incoherent about attributing (i) and (ii) to agent intellect, and this is surely Aquinas’s position. Sometimes, for instance, he speaks as if abstraction transforms the representational content of phantasms:

To abstract universal from particular, or intelligible species from phantasms, is to consider the nature of the species without considering the individual principles that are represented by the phantasms (85.1 ad 1).

Elsewhere he clearly indicates that the agent intellect transforms the intrinsic features of the phantasm, as when he describes agent intellect as “a kind of active immaterial power, able to make other things like itself – that is, immaterial” (*InDA* III.10.156–8).¹⁰

So the agent intellect seems to perform both functions. But this raises a serious interpretive problem. Although there is nothing inherently odd about a faculty that plays two discrete roles, it is nevertheless peculiar that Aquinas does not explain their relationship. Does one come before the other (temporally, logically)? Does one happen in virtue of the other? Might the two operations somehow be identical, despite their apparent difference? It is worrisome that sometimes Aquinas seems to run the two functions together, as if there were no real difference between them:

Phantasms, since they are the likenesses of individuals and exist in corporeal organs, do not have the same mode of existence that the human intellect has. . . .

Thus they cannot through their own power make an impression on the possible intellect. But through the power of the agent intellect a certain likeness results in the possible intellect . . . (85.1 ad 3).

The first sentence gives two different reasons for why phantasms have a mode of existing different from that of intellect. First he refers to representational content ("they are likenesses of individuals"); then, in the same breath, he refers to their intrinsic materiality (they "exist in corporeal organs"). But these would seem to be two very distinct characteristics.¹¹

Aquinas seems committed, given other claims that he makes, to holding that (i) and (ii) are mutually entailing. On the one hand, he holds that the senses, because they cannot perform (ii), cannot perform (i) either: "the sensory capacities cannot cognize universals because they cannot receive an immaterial form, because they always receive in a corporeal organ" (*SCG* II.75.1551b; see 85.1c). Here the inability of the senses to possess anything other than intrinsically corporeal forms precludes their ability to have forms that represent things incorporeally. It is not at all clear why there should be a connection here, unless Aquinas is assuming that abstraction (i) requires abstraction (ii).

On the other hand, he holds that the intellect, because it must engage in abstraction, cannot directly cognize particular corporeal things:

(1) The principle of singularity in material things is individual matter, whereas (2) our intellect, as was said above, cognizes by abstracting an intelligible species from matter of this sort. But (3) that which is abstracted from individual matter is a universal. As a result, (4) our intellect is directly cognitive only of universals (86.1c).

This is an extraordinarily puzzling argument. The first premise points to an ontological fact whereas the conclusion appeals to an intentional fact – a fact about what intellect can cognize. He gets from (1) to (4) via two ambiguous premises. Premise (3) is only superficially ambiguous. It must be abstraction (i) that Aquinas has in mind here; as noted earlier, intelligible species represent universally but are not intrinsically universal. Premise (2) is likewise ambiguous, and here the ambiguity seems fatal. On one hand, the argument will be valid only if this premise refers to abstraction (i): we must of course be talking about the same kind of abstraction in premises (2) and (3). On the other hand, the argument will be valid only if this premise is read as holding that the intellect *always* engages in abstraction. (If it is sometimes capable of cognition without abstraction, then it should sometimes be capable of directly cognizing things other than universals.) But the only argument Aquinas has given us to show that intellect must always abstract is the argument of 84.6c, which explicitly appeals to abstraction (ii), abstraction in the ontological sense. So premise (2) is defensible only when taken as referring to abstraction (ii). But for the argument to be valid, it must be taken as referring to abstraction (i).

In short, the argument of 86.1c illicitly assumes that the intellect must always engage in abstraction (i) – that it must always turn representations of material particulars into representations of universals. And although we have seen why this is something that the intellect ought to be *capable* of, we have seen no reason to think this is something that the intellect must always do. Evidently, Aquinas sees some kind of link, which he never makes explicit, such that abstraction (ii) entails abstraction (i). Likewise, the argument of *SCG* II.75 above assumes that the senses are barred from performing abstraction (i), because their immateriality precludes them from abstraction (ii). Here abstraction (i) seems to require abstraction (ii).¹²

Why would Aquinas take these two forms of abstraction to be mutually entailing? The most likely explanation, *prima facie*, is that he supposes abstraction (i) happens only in virtue of abstraction (ii), because he supposes that an intelligible species can be a likeness of the immaterial features of an object if and only if that species is intrinsically immaterial. An intelligible species is a likeness, after all, and so it can fulfill its representational function only in virtue of having certain properties in common with what it represents. To represent things as immaterial, a species must be immaterial. If this were right, then these two forms of abstraction would be mutually entailing.

The difficulty with this proposal is not just that Aquinas never states it himself but that it flies in the face of remarks he repeatedly does make. In explaining the way in which sensible and intelligible species represent their objects, Aquinas stresses that the agreement in question is not an agreement in nature, but an agreement in representation. This means, for instance, that a sensible species can represent colors without being actually colored (78.3c). More to the point here, it means that an immaterial form can represent objects that are material:

Although in the mind there are only immaterial forms, nevertheless they can be likenesses of material things. For a likeness need not have the same sort of existence as that which it is a likeness of; instead, they need agree only in their account [*in ratione*]. In this way, the human form does not have the same sort of existence in a golden statue that it has in flesh and bones (*QDV* 10.4 ad 4).

It is of course highly difficult to explain how one thing represents another, and Aquinas is not very helpful here in appealing to sameness *in ratione*. But it is clear that his theory of representation is not based on a crudely literal requirement of likeness. There is no reason, then, why a species must be immaterial to represent things as immaterial.¹³

So why does Aquinas link these two forms of abstraction? The only explanation I find plausible is not a very charitable one. It seems to me that Aquinas has fallen victim to what I call the content fallacy: the fallacy of conflating facts about the content of our thoughts with facts about what shape or form those thoughts take in our mind. When Aquinas characterizes the soul as “having one power through which it makes things actu-

ally immaterial by abstracting from the conditions of individual matter, a power which is called the agent intellect" (79.4 ad 4), it seems to me that he has fallen victim to an ambiguity in the phrase "abstracting from the conditions of individual matter." That phrase might mean that the agent intellect produces an entity that is immaterial rather than material, by stripping away the corporeal aspects of the phantasm. Or the phrase might mean that the agent intellect changes the representational content of the phantasm, making it so that the newly formed intelligible species no longer represents "the conditions of individual matter." The above text (79.4 ad 4) seems entirely ambiguous. Elsewhere, it seems more clear that he means one, or the other, or both. But given his lack of clarity on the subject, it would be no surprise if he fell into serious confusion.¹⁴

Regardless of whether Aquinas has in fact fallen victim to the content fallacy, it seems clear that the Treatise describes two different kinds of abstraction without explaining how they are linked. When abstractions (i) and (ii) are not carefully distinguished, it is easy to fall into the mistake of thinking that Aquinas can explain the epistemological work that intellect must do by appealing to the fact that the intellect does not use a corporeal organ. Here, intrinsic facts about the nature of intellect would be used to explain how intellect performs the cognitive operation of grasping the common natures of things. Once the two forms of abstraction are distinguished, it becomes clear that the intellect's immateriality explains nothing about its cognitive function. This in turn raises the question of whether Aquinas has an account of how abstraction (i) takes place. How does the agent intellect manage to strip away the accidental features of an object, leaving only a likeness of the common nature?

Aquinas's answer appears to be simple – too simple. He seems to think that the agent intellect gets at the common natures of things by *focusing its attention* on the object's nature, ignoring its irrelevant accidental features:

... We intellectually cognize one thing while not considering the other at all. ... We consider the color and its characteristics, considering the colored apple not at all. ... Nothing prevents the color from being intellectually cognized while cognizing nothing of the apple. ... The things pertaining to the nature of any material thing's species (e.g., stone, human being, or horse) can be considered without the individual principles. ...

And this is to abstract the universal from the particular, or an intelligible species from phantasms: to consider the nature of the species without considering the individual principles that are represented by the phantasms (85.1 ad 1).

This, as it stands, explains very little. What is wanted is an account of the agent intellect's special capacity for grasping the quiddities of things. What this passage provides is an account of the agent intellect as a kind of inner sense, focusing its attention this way and that. If abstraction is simply a matter of focusing attention, then why can't the senses do that just as well?

Evidently, the agent intellect has some special capacity, something beyond its ability to focus selectively. Any substantive account of the agent intellect must tell us what this special capacity is, and must do so in a way that does not simply appeal to the agent intellect's immateriality.

This apparently crude selective focus account raises in the most obvious way the two classic problems of abstraction:

1. How do the senses, given their materiality, represent "the nature of the species" in such a way that this information can be lifted out by a simple process of selective attention?
2. Even given that such information is there, how does the intellect know what to focus on, and what to abstract out?

These two problems are plainly entwined. The more one insists, in reply to (1), that the senses do not represent the conceptual features of the material world, the harder it becomes to give a satisfactory answer to (2). Conversely, the more one stresses that the agent intellect's role is merely one of *abstracting*, of separating the universal from the particular, the more one is forced to make this information explicit at the sensory level, and thus to give conceptual content to the senses, something no Aristotelian can allow.¹⁵

Aquinas understands the dilemma. With respect to the first question, he acknowledges that the senses must somehow represent the universal features of things:

If the senses apprehended only that which belongs to the particular, and in no way were also to apprehend the universal nature in the particular, then it would not be possible for a universal cognition to be caused in us by a sensory apprehension (*InPA* II.20.266–71 [§595]).

Therefore, "the senses cognize Callias not only insofar as he is Callias, but also insofar as he is a particular human being"; it is this that makes it possible for the intellect "to consider the human being in both Socrates and Callias" (*ibid.*, 261–66). In §10.1 we saw how Aquinas's theory of universals underwrites this talk of "the universal nature in the particular." The nature is really there, in the particular thing; it is not the creation of intellect. As a result there is no difficulty, at least in principle, with the senses perceiving the natures of things. Still, at the sensory level, such natures are wrapped up in particular details. Callias is perceived "as a *particular* human being."¹⁶ So, turning now to the second problem of abstraction, how does the agent intellect unravel what is essential? How does it know where to cut?

Sight can in no way cognize abstractly that which it cognizes concretely. For it can in no way perceive a nature, except as a particular nature. But our intellect can consider abstractly that which it cognizes concretely. For even if it cognizes things that have a form in matter, still it analyzes [*resolvit*] the composite into both parts, and considers the form itself in its own right (12.4 ad 3).

Here Aquinas shows some awareness that abstraction is a nontrivial task, that it requires distinguishing form from matter, the essential from the accidental. But how does the agent intellect do it? Aquinas has virtually nothing more to say to such questions, neither here nor elsewhere.

It is at this point that Aquinas's naturalism again gives out. Just as he has no account of how the agent intellect grasps the truth of first principles (§10.2), so here he has no theory of how the agent intellect manages to focus its attention on the common natures of objects. Aquinas perhaps regards such questions as tantamount to asking how one recognizes that $2 + 2 = 4$. We just do it, one wants to say, there is nothing more to be said. If pushed to say more about the agent intellect, Aquinas would take refuge in the supernatural. We are capable of abstraction because of the light of agent intellect. What is that light? It is "a certain likeness of the uncreated light, obtained through participation" (84.5c).

It may seem enormously disappointing for Aquinas to abandon naturalism so quickly. His account of agent intellect seems to appeal to nothing more than a kind of magic. Moreover, his account of intellectual cognition seems to rely crucially on agent intellect, at every step of the way. We start from "universal concepts that are cognized at once by the light of agent intellect" (*QDV* 10.6c). From there we grasp first principles. In time we work our way to grasping the essences of objects. At every step, it seems that the agent intellect is playing the leading role. Thus the task of abstraction is "to consider the *nature of the species* without considering the individual principles" (85.1 ad 1, as above). For Aquinas to say that this is just something that the agent intellect can do (in the way that we just see that $2 + 2 = 4$) would be for him to admit that he does not have a theory of intellectual cognition at all.

Yet Aquinas does have a theory. It is a theory not of how the agent intellect works (an ultimately mysterious topic), but of how the intellect works as a whole. Admittedly, he has little to say about the process of abstraction. But we are going to see that abstraction does less work for Aquinas than initially appears.¹⁷ Contrary to appearances, the agent intellect plays no more than a limited (albeit crucial) role in Aquinas's broader theory of intellectual cognition.

10.4. Universals

We saw in §10.1 how "the object of our intellect, in its present state, is the quiddity of a material thing, which it abstracts from phantasms" (85.8c). Another way of describing the operation of intellect is to say that "the senses concern singulars, whereas the intellect concerns universals" (85.3c). It might seem that these are both ways of pointing to the same distinctive capacity of intellect: the capacity to grasp the essential, universal features of the sensory world. But in fact it is important to draw a distinction. The *object* of intellect is the quiddities of objects in the natural

world. The *way* in which the intellect cognizes such objects is universally. This is to say that the intellect does not determinately grasp Callias's nature, or Socrates's; instead, it has just a single apprehension of human nature in general, an apprehension that (ideally) applies to each individual case.

There is an obvious reason why these two characterizations should go hand in hand, why we should have a *universal* grasp of *quiddities*. For given that these quiddities just are the common, shared essences of things, one loses virtually no information by grasping them universally. Why have a separate representation for Callias's nature and Socrates's, when the two natures are identical? Still, these are two different characteristics of intellect – characteristics that not only might come apart, but that more often than not do come apart. For although the intellect always cognizes universally, it does not always succeed in understanding the quiddities of things.

What exactly is the difference between grasping quiddities and grasping universals? Grasping quiddities from the natural world is an unambiguously good thing, the ultimate cognitive achievement in this life. Cognizing universally, in contrast, is a mixed blessing. It is not an accomplishment so much as it is the unavoidable means by which the intellect performs its functions. For human beings, quite often, cognizing universally is nothing to be proud of.

These last remarks may seem implausible. Surely the intellect is superior to the senses precisely because of its capacity for going beyond merely particular details, for seeing what things have in common. Didn't Aristotle write at the start of the *Metaphysics* that the person with universal knowledge is the one who knows all things, and that the most universal knowledge is the most difficult for us to acquire, being the farthest from the senses? Aquinas endorses these remarks, but he nevertheless argues in 85.3 that the human intellect does not aim at the most universal knowledge but instead begins there. We move from the more universal to the less universal.

It is helpful at first to consider the case of God, who "understands all things through his own single essence" (89.1c). In a single act of thought, through his essence, God "cognizes all things, universal and singular" (89.4c). This is the limiting case of universal cognition: God has "the highest degree of universality" (*SCG* II.98.1836). On the one hand, the object of his intellect is infinite:

The proper object of intellect is intelligible being, which covers all the possible differentiae and species of being: for whatever can be, can be grasped by intellect (*ibid.*, 1835).

Only God, needless to say, is entirely successful in grasping all that information: "it is distinctive of God that without any investigation he understands all things" (79.10 ad 2). But whereas his object is infinite, his means of cognition is simply his own individual essence: "In God the whole

plenitude of intellective cognition is contained in one thing, the divine essence, through which God cognizes all things" (55.3c).

In passing from God's situation to our own, we go from the ideally perfect case of intellective cognition to the least perfect case: we hold "the lowest rank among intellectual substances" (76.5c). Our grasp of reality is the weakest of any creature possessing an intellect. Because we are finite, we cannot hope to grasp intelligible being – the species and differentiae of the various possible kinds of entities – in its infinite complexity: "No created intellect can be related to all of universal being as its actuality; for if it were, then it would have to be an infinite being" (79.2c). Moreover, we have to struggle to achieve whatever successes we achieve through a great many discrete representations. "For each intelligible object, the human intellect needs a distinct intelligible species matching it" (SCG II.98.1836). So we fall short of God both in the amount of information that we grasp and in the means through which we grasp it. But things could be worse. At least we do have the capacity to grasp intelligible being. Other animals, limited to their senses, are stuck at the preconceptual level, the world of particulars.

When human beings are described in this way, above the other animals but far below God, it looks as if the characterization of *Metaphysics* I is right on the mark. We begin with the sensory and work our way toward the universal. The more universal our grasp of reality, the closer we come to perfection. Aquinas of course accepts much of this. It is true, first, that "intellective cognition somehow gets its start from sensory cognition" (85.3c). This in turn entails that "the cognition of singulars is prior, for us, to the cognition of universals" (85.3c). But when one focuses purely at the level of intellect, one sees a different pattern. Here Aquinas argues that we go from the more universal, or the more common, to the less universal and less common. This is so, he says, because our intellect only gradually moves from complete ignorance to perfect knowledge. We start out with an imperfect grasp of objects; at this point, "things are known indistinctly, *sub confusione*" (85.3c). So in one sense we aim at universal cognition, but in another sense that is where we begin.

To grasp things *sub confusione* is to grasp them indiscriminately, to lump objects together at the expense of their salient differences. We all do this at first. A friend sent me this account of his daughter's behavior:

Emma just turned two. . . . Common questions: "Daddy, are you a guy?" I answer in the affirmative. Same question. Repeat. Then, sometimes: "Daddy, are you a girl?" Sometimes she'll ask if I'm a big guy or a little guy. A couple of nights ago she was jumping in her crib at bedtime, and declared, "I'm jumping. I'm a person." Can Descartes really do better than that? (I asked her if mommy and I were persons, too, and she allowed that mommy was, but that I wasn't, since I was a guy.)

With age and experience, we go from the more universal to the less universal; our ideas acquire a certain precision. "The things better known to

us are confused things, of which sort are universals; therefore we must go from universals to singulars" (*InPh* I.1.6). Aquinas offers his own example:

Someone who cognizes certain things perfectly can distinguish, up to the finest details, their acts, powers, and natures. Someone who cognizes them imperfectly, on the other hand, can distinguish only at the level of universals, making fewer distinctions.

For instance, someone who imperfectly cognizes natural things distinguishes their class at the level of universals, putting celestial bodies in one class, the lower inanimate bodies in another, plants in another, and animals in another. But someone who cognized natural things more perfectly could distinguish the different classes among the celestial bodies, as well as among each of the others (108.3c).

Our cognitive goal is to take the highly universal, confused ideas that we acquire first and to reach as distinct a grasp as possible of the discrete contents of those ideas. Aquinas refers to this as the process of *resolution* (*InPh* I.1.7).

So the difference between our cognitive capacity and God's is not precisely a difference in scope. God's cognitive object is all intelligible being, and so is ours, at least in principle. But the concept we are able to acquire is thoroughly confused.¹⁸ We recognize a fairly short list of species and differentiae, but this is nothing like God's grasp of all possible and actual kinds. Here, then, is a sense in which God's knowledge is not as universal as ours: if we follow the usage of 85.3c, and say that a more universal cognition is one "in some confusion, without the parts being distinctly cognized," then universality is a flaw in our own mode of cognition.

Obviously, Aquinas is working with a number of different notions of *universality*. In fact, he can make all the points he wants by distinguishing between just two different senses in which a thing is cognized universally:

To cognize something universally is said in two ways. *First*, with respect to the thing cognized, so that only the universal nature of the thing is cognized. To cognize something universally in this way takes away from perfection. For one cognizes a human being imperfectly who cognizes only that he is an animal. *Second*, with respect to the medium of cognition. Cognizing something universally in this way adds to perfection. For an intellect that can properly cognize singulars through one universal medium is more perfect than one that cannot (55.3 ad 2).

The first kind of universality consists in *confusion*, the lack of precision described above, and this is of course not an asset. The human intellect, above all others, suffers from this fault. The second kind of universality consists in the capacity to cognize many things through a single mental representation; we can think of this as universality in *comprehension*. It is in this sense – and this sense only – that God turns out to have "the highest degree of universality" (*SCG* II.98.1836). In comprehension, we are the lowest on the scale of intelligent beings, the runt of our genus. But still we do have intellects, and it is one of the intellect's distinctive features that "the form of the thing intellectually cognized is in intellect universally

...” (84.1c). We can now see the precise way in which this is true. Intellect cognizes universally because it, unlike the senses, can grasp the nature of more than one object in a single thought. The senses are restricted to the here and now; sensory apprehension can extend no further than what is right in front of it.¹⁹ Intellect’s ability to cognize comprehensively has nothing to do with its ability to grasp the essences of material objects. Even if a person went through a whole life without grasping the essence of a single object, still that person would have benefited from the universality (in comprehension) of intellective cognition.

What exactly are the benefits? This becomes clear when one looks at what Aquinas thinks intellective cognition consists in. In his *Metaphysics* commentary, Aquinas says we reach a cognition of truth in two ways: through *resolution* (as above) and through *composition*, which consists in putting simple things together in a complex way (*InMet* II.1.278). More standardly, Aquinas distinguishes between three operations performed by intellect: (1) the grasp of indivisible, noncomplex ideas; (2) composition and division; and (3) rational inference (see §9.2). On his view, our need to engage in composition and division, and even more our need to engage in rational inference, stems from our inability to understand the world in the way that God or even the angels do. Because we need a distinct intelligible species for each intelligible object (see *SCG* II.98.1836, above), we cannot all at once grasp the complete characteristics of, say, the higher primates. We have an idea about what a chimpanzee is, and an idea about what a gorilla is, but we need to think through the thought that, say, chimpanzees are more closely related to human beings than gorillas are. This is not information that is contained in our idea of the higher primates or our idea of chimpanzees.²⁰ Indeed, it is a feature of Aquinas’s account that our ideas are so thin as to make it almost impossible to say what they contain. If the very notion of the *idea* of a chimpanzee seems obscure, that is because human beings, by their very nature, are so poorly suited to have ideas. A human idea, for Aquinas, is nothing more than a moment’s passing thought; it itself is literally ineffable (see §10.5). To give that thought substance it must be linked with other ideas, via composition and division, so that from our thin conceptual base we develop thoughts that are both worth expressing and capable of being expressed.

For God and the angels, matters are entirely different. God, on my terminology, has just one idea, one that is infinitely rich in information. Because God knows everything, he has no need of rational inference, of course, but also no need of composition and division. He sees immediately how everything is connected. Angels fall between God and us, with some coming closer to us than others. (Since all angels are finite in their capacities, the highest angel is infinitely closer to us than to God.) The workings of the angels are not so hard to conceive of as in God’s case, but still the differences are great. Whereas we need a discrete idea for every object we want to think about, the angels can grasp complex relationships in a single idea. Our idea of *animal* gives us an imperfect, generic grasp of the

different species: to grasp the human species we need the separate idea of *rational*. Angels don't work that way: their single idea of *animal* gives them a perfect grasp of all the specific differences within the genus: "through a single likeness a separate substance cognizes both animal and the differences among animals" (*SCG* II.98.1837). This is a mode of cognition that we can scarcely imagine. Angels can immediately see (without either composition or division or inference) all the connections between the various species that fall within a genus. What we discover only through comparison is self-evident to the angels, who "have no need to go from one intellection to another; they unconditionally and without inference apprehend the truth about things" (79.8c).

We can now understand exactly what makes the intellect so special. It is special not because of its rationality, but because of its capacity to have thoughts that are universal in comprehension – to have general, abstract ideas. This is one crucial contribution of the agent intellect. Abstraction does not explain how we manage to eliminate the confusion in our ideas, and therefore does not explain how we get at the exact nature or essence of an object. But abstraction does account for the generality, the comprehensiveness, of our ideas: "abstraction, which is common to all intellects, makes a form universal" (*QDV* 2.6 ad 1). This capacity, magical and inexplicable as it is, is what makes us intellectual creatures.

Compared with other animals, our intellect gives us an enormous advantage. Because we are able to conceive the world in terms of kinds, we can function in ways that other animals cannot. Our capacity for universal ideas allows us to draw inferences and make predictions on the basis of our classificatory schemes. It is not precisely our rationality, then, that distinguishes us from other animals, but our capacity for having ideas that are universal in comprehension. Rationality is a tactic developed to supplement the limited comprehensiveness of our ideas; it is "the result of the

Angels and computers

What would it be like to minimize confusion without achieving any sort of comprehension? This, it seems to me, is how Aquinas would think of computer intelligence. The vast amount of detail grasped by computers is counterbalanced by their inability to have what Aquinas would regard as universal concepts. For computers, like the senses, all cognition is particularized. But it may be that this handicap can be overcome by the staggering computational abilities of a computer. Ultimately, computer cognition might become the mirror-image of angelic cognition: computers, through sheer quantity of data and inferential speed, would be able to grasp in a few milliseconds of calculations what an angel can understand at a glance.

weakness of the intellectual light in human beings" (58.3c).²¹ Reasoning is the crutch with which we hobble from one idea to another. God does not reason, no more than he rolls dice.

The angelic and divine intellects immediately have a perfectly complete cognition of a thing, and so in cognizing the thing's quiddity, they cognize at once whatever we can cognize of the thing through composition and division and reasoning (85.5c).

Our capacity for universal comprehension would be of little use were it entirely engulfed in confusion. The human intellect is a powerful tool, but one that becomes useful only when we are willing to undertake the hard work of turning our confusedly universal ideas into something sharper and richer. This kind of work, the process of *intelligere*, belongs not to the agent intellect but to the possible intellect, and indeed to the whole human being.

10.5. *Intelligere*

The human soul, Pseudo-Dionysius wrote, "circles around the truth of things in a scattered and roundabout way" (*Divine Names* VII.2). Aquinas makes this characterization of intellective cognition his own, offering a commentary on the passage that highlights the central features of his theory of intellective cognition:

The truth of things consists, fundamentally, in an apprehension of the quiddity of things. Rational souls cannot on their own apprehend such a quiddity at once, but *scatter* over the properties and effects that encircle the thing's essence, so that from these they reach the truth itself. They achieve this in a *roundabout way*, since they discover causes on the basis of properties and effects, and make judgments about effects on the basis of causes (*InDDN* VII.2.713).

The object of intellect is the nature of the material objects in the world around us: "the human intellect . . . has as its proper object a quiddity or nature existing in corporeal matter" (84.7c; see §10.1). But despite Aquinas's confidence in the accuracy of our intellect – "with respect to the quiddity of a thing, speaking per se, the intellect is not deceived" (85.6c) – there are no guarantees that we actually will succeed in grasping the natures of things. Indeed, "substantial forms are unknown to us in their own right . . ." (77.1 ad 7), which is to say, as we saw in §5.5, that we have no direct access to these forms, and can learn about them only indirectly, "in a roundabout way," as pseudo-Dionysius says here. So although we cannot be deceived regarding what we do grasp of quiddities, "we *do* fail by entirely not attaining" such knowledge (85.6c). Indeed, Aquinas seems quite willing to allow that the intellect goes wrong in many different ways even as regards its apprehension of quiddities. None of this counts as error or falseness, however. To err regarding some object requires first conceiving of that object and then making a false judgment about it. The initial

operation of intellect does make mistakes, but when it does so it simply fails to conceive of the object at all (17.3c). In such cases it hasn't said anything false about the object, because it hasn't conceived of the object at all.

The knowledge we acquire is *scattered*; we work our way in, starting with the effects and looking for the ultimate cause, the thing's quiddity. In this respect we are significantly different from the angels:

Because angelic minds contemplate the truth in a unified way, in virtue of a simple consideration, souls fall short of the angels insofar as our souls scatter over a cognition of the truth, on account of the diversity and number of various things (*InDDN* VII.2.713).

The angels make for an illuminating contrast case. They grasp the natures of things all at once, in a single intellectual glance. "In the things they first naturally cognize, they at once discern all of the things that can be cognized, whatever they are" (58.3c). This is universality in the comprehensive sense (see §10.4). If human souls "had the abundance of intellectual light that angels have, then they would at once, in their first glance at principles, grasp the entire force of those principles, intuiting whatever could be inferred from them" (58.3c). As things stand, our thoughts lack this sort of comprehension; they are scattered, and work "in a roundabout way," from effects to causes, and from causes back to effects.

Despite this gulf, Aquinas (still following Pseudo-Dionysius) stresses that the human intellect is in some sense on a par with the angelic intellect:

But still, because they can weave many things into one (as when from many effects and properties they reach a cognition of a thing's essence), to that extent our souls have some worth. In fact, human beings have intellects equal in a certain way to the angels – equal, that is, with respect to their souls' distinct character and potential. For the inquiry of reason ends with a simple understanding of the truth, just as it begins with a simple understanding of the truth considered in first principles. And so, in the process of reasoning there is a kind of interweaving, like a circle, when reason begins with one thing, works through many, and ends with one (*InDDN* VII.2.713).

The human intellect, by dint of hard work, can achieve a certain sort of equivalence with the angels by taking its initial first principles and working toward a grasp of a thing's essence. What the angels do all at once, we do over time, by an "interweaving" (*convolutio*) of its various strands of inquiry. Such interweaving is the essence of what Aquinas calls *intelligere*.

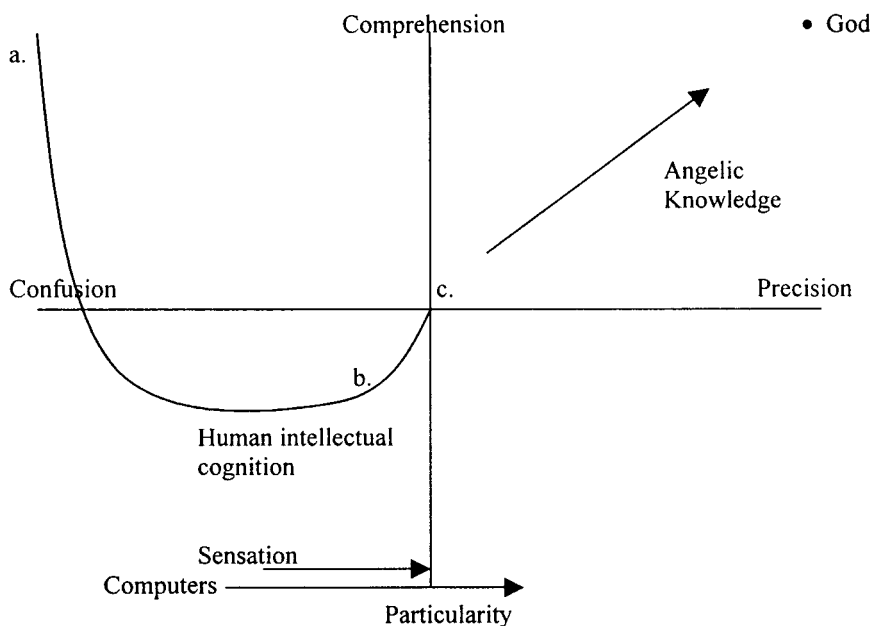
The intellect "begins with a simple understanding of . . . first principles," such as the principle of noncontradiction. Strictly speaking, we begin by understanding the terms of such principles; the truth of the principle is seen as soon as the terms themselves are grasped. "For first principles become cognized by the natural light of agent intellect; nor are they

acquired through reasoning, but only through their terms' being made known" (*InMet* IV.6.599). The principle of noncontradiction is grasped as soon as the nature of being is grasped. Since the idea of *being* is what every intellect first conceives (*QDV* 1.1c), the principle of noncontradiction is accordingly the first principle conceived through composition and division (*InMet* IV.6.605). Following *being*, Aquinas argues that we next acquire the ideas of *one* and *good* (*InDH* 2.9–18 [20]), and these in turn lead to further first principles, such as the first principle of practical thought: "all things desire what is good" (12ae 94.2c). These initial conceptions form the core of all subsequent thoughts: "human reasoning, in the course of investigation and discovery, sets off from certain things that are grasped *simpliciter* by intellect; these are first principles" (79.8c).

It can easily seem bizarre to suppose that *these* are the first conceptions of a child's mind. Even if we grant that "human beings share in the first objects of intellect" (79.5 ad 3), it is hard to believe that these shared first objects are the transcendental conceptions of *being*, *one*, and *good*. If we wish to identify something as the first conception of intellect, then wouldn't we be better off looking for something along the lines of *food*, or *warm*, or *mother*? Yet all of these more obvious candidates for a child's first conceptions will presuppose one or more of the above transcendental ideas. When a child utters the word 'mama,' the child must be expressing the thought either of mama's presence (*being*), or of the desire for mama's presence (*being + good*). And to have a thought about any determinate object requires the conception of a discrete entity (*one*). All of this takes some sophistication to recognize, let alone articulate, but Aquinas is of course not claiming that infants actually recognize their basic conceptual framework. The claim, instead, is that the framework must be there, unarticulated, as a precondition on all subsequent thought.

Once we see that these initial concepts are utterly primitive and inarticulate, it becomes easier to see why Aquinas has no real account of abstraction. Just as our grasp of basic mathematical truths seems too immediate and trivial to admit of analysis, so our initial grasp of basic concepts is so primitive as to make analysis seem out of place. These initial ideas are so general – universal in the confused sense – as to be scarcely identifiable as ideas at all.

The process of "interweaving" begins with these first ideas and first principles, and "ends with a simple understanding of the truth" (as above). The process is, in a sense, circular, inasmuch as "reason begins with one thing, works through many, and ends with one" (as above). But such circularity is productive. The intellect begins life a blank slate, then quickly acquires the ideas (*being*, *one*, *good*) that are the foundation for all other concepts. With every new conception, these ideas take on increasing clarity, and a child gives meaning to a new part of the surrounding world. In contrast to the angels, we grasp things in a scattered fashion; our universal ideas lack the comprehension of angelic thought. So the process of intellectual cognition, for us, requires an effort to synthesize our thought, to



The x -axis runs from confusion to precision. The y -axis runs from comprehension to particularity. On the curve representing human intellectual cognition, the section at (a) represents our first concepts (being, truth, good). These are utterly trivial and confused, but high in comprehensiveness. As soon as we seek any specificity, we plummet in comprehensiveness. At (b), the curve rises more sharply as we approach the limits of empirical knowledge. At this point, progress consists largely in increased conceptual comprehensiveness. The juncture of the x - and y -axes (c) marks the outer limit of human knowledge at the turn of the millennium. Angelic knowledge goes beyond this along both dimensions. God's knowledge is ideally comprehensive and precise.

put our assorted thoughts into such a form that they might be coherently expressed. This is the endpoint to which Aquinas refers, and which he elsewhere calls the formation of a concept or mental word (*verbum*).

Such concepts are requisite for all genuine understanding, and for any act of communication.²² Only at this point can we properly speak of intellectual *concepts*; only at this point has the intellect grasped the nature or quiddity of an object:

When I wish to conceive the nature of a stone, I must get there through reasoning. So it is for all things that are intellectually cognized by us, except perhaps for first principles; since these are grasped *simpliciter*, they are known at once without any discursive reasoning. As long, then, as the intellect is tossed this way and that, reasoning in this way, its formation will not be complete – until it has completely

conceived the thing's nature, and then for the first time it has the character of a mental word (*InJoh* I.1.26).

Viewed from this perspective, the agent intellect's operation of abstraction emerges as just the first step down a long path. First the agent intellect forms some crudely confused ideas about the general features of our sensory environment. Then the possible intellect takes those confused ideas and works with them, through the process of discursive reasoning, until concepts emerge that have sufficient richness and precision to be worth expressing.

Concepts, unlike ideas (on my terminology), are rich in content. At this point the soul "can weave many things into one" (*InDDN* VII, as above). Because such concepts are the end product of an extended process of development, they express more than one's occurrent thoughts. One's idea of a chimpanzee – the initial product of agent intellect – is thin and ineffable (see §10.4). One's concept of a chimpanzee, in contrast, has links with the rest of one's conceptual scheme, so that in talking about chimpanzees one is invoking a complex framework of biological and even metaphysical concepts. This is how our words and thoughts manage to convey a meaning that goes far beyond what we are thinking about at the present moment.

Verbum Dei

Intelligence, according to Aquinas, should be measured according to a being's capacity to grasp information all at once, in a single concept:

Compared to a lower capacity, a higher capacity concerns itself with a more universal account of its object. For the higher a capacity is, the more things it extends itself toward (77.3 ad 4).

God, the limiting case of intellectual perfection, has just one concept, and this concept comprehends all of being, down to the slightest detail. This concept cannot be fully communicated to creatures, but that is not to say that it is ineffable. The mind of God is fully expressed in the Son, the second person of the Trinity, who is identified as the concept or *verbum* of the divine mind: "The unique divine Word expresses everything that is in God: not only the divine Persons but also creatures (*InJoh* I.1.27; see 34.3). In a sense, there is little here that is distinctively Christian. A long tradition in Greek philosophy had drawn similar distinctions among immaterial "hypostases" – most notably, Plotinus's account of the One, the Intellect, and the Soul (see Irwin 1989, ch. 10). What gives Christianity its distinctive character is its claim, as expressed in the Gospel of John (1.14), that *the Word was made flesh, and dwelt among us, and we beheld its glory*.

In this respect we are “equal in a certain way to the angels” (*InDDN* VII, as above). Still, our intellect’s feeble nature holds us back. Despite our ability to interweave various ideas into a single concept, our intellect remains forced to express different thoughts through different concepts:

Because we cannot express all of our conceptions in a single mental word, we must form various incomplete mental words, through which, in piecemeal fashion, we express all of what is contained in our knowledge (*InJoh* I.1.27).

We do grasp things universally, of course, but we lack the comprehension of angels. As a result, our thoughts are fragmentary and often contradictory, incomplete and never actualized to the fullest possible extent.

From this broader perspective, it is much easier to tolerate Aquinas’s insubstantial remarks about the agent intellect and abstraction. Abstraction is not by itself intended to get at the common natures of things. The agent intellect cannot, in a flash of insight, distinguish essence from accident; such insight is possible only as the end product of experience and deliberation. Much of what counts as intellectual activity is the operation of the possible intellect (see 79.10c). But this is not to say that at this point the possible intellect takes over the whole process. It is the human being who thinks, not the possible intellect, inasmuch as rational thought is a product of the possible intellect working in concert with the senses, the will, and the agent intellect. The agent intellect remains able to contribute because it is not static in its capacities; it improves with “practice in activity of this sort – for one intellectual act leads to others, as words lead to sentences, and first principles lead to conclusions” (79.4 ad 3). As the intellect extends and sharpens its field of concepts, we can expect the light of agent intellect to grow brighter. Some things that look obvious now – finessing the queen, *modus tollens* – would not have been obvious at age twelve. There *is* something magical about the workings of the intellect, but the magic comes with practice, and it can be taught and largely explained.

II

Knowing the mind

καὶ αὐτὸς δε νοητὸς ἔστιν ὥσπερ τὰ νοητά
(*De an.* III 4, 430a2–3; see p. 336)

Aquinas offers a sophisticated and rewarding account of how we know our own minds. Although he denies that the mind has direct access to its own nature (§II.1), he believes that through indirect methods the mind can understand itself. The reflective method he proposes is interesting because it opposes the introspective model, but at the same time accounts for the special access we so clearly do have to our own minds (§II.2). In advancing a theory of this form, Aquinas defends an approach that falls in between the two extremes of direct introspection and behaviorism. This moderate approach accounts for why it is so hard for us to understand the mind (§II.3). Moreover, the approach can be extended into a general explanation of how we understand other minds (§II.4).

II.1. The inscrutable self

Aquinas devotes QQ84–86 to our knowledge of the external, material world; in Q87 he turns to our knowledge of our own minds. The former series of questions had begun by asking whether the mind does in fact have knowledge of external, material things. Aquinas concluded that we do have such knowledge, in a certain way: “Therefore, it must be said that the soul, through intellect, cognizes bodies by means of a cognition that is immaterial, universal, and necessary” (84.1c; §10.1). In Q87 there is no parallel article devoted to the fundamental question of whether the mind has self-knowledge. Aquinas simply takes such knowledge for granted: his idea, presumably, is that the previous twelve questions (QQ75–86) make the best case he knows how to make for the mind’s ability to understand itself. Anyone still in doubt at this point of the Treatise about the possibility of self-knowledge is unlikely to be persuaded by any further considerations.

The business of Q87, then, is to develop an account of *how* the mind manages to understand itself. One might wonder why such a foundational question was not discussed at the start of the Treatise. As we’ll see, these articles could not have come any earlier, because they rely heavily on earlier findings about the way the mind works. Aquinas treats self-knowledge as simply a special case of the intellect’s cognitive operations,

and so he develops Q87 in the context of his more general theory. But this special case obviously has important methodological implications: these articles not only extend his general theory of the mind's operation, but serve to justify and illuminate retrospectively the method employed by earlier articles. The analysis is necessarily retrospective, because Aquinas had to employ the methodology, in QQ75–86, before he could be in a position to explain and defend the methodology, in Q87. The procedure is circular, of course, but in an entirely virtuous way. The coherence of the whole account is among the best arguments for each of its discrete parts.

Aquinas begins Q87 by asking

a1. Does the intellective soul cognize itself through its essence?

This parallels an earlier article from Q84:

a2. Does the soul intellectually cognize bodies through its essence or through species?

In each case Aquinas wants to deny that the intellect's cognition occurs "through its essence," and to insist that the intellect works "through species." By denying that the intellect cognizes "through its essence," Aquinas does not mean to deny that the intellect can reach some sort of grasp of its own essence. This is possible, albeit indirectly, as we'll see. What Aquinas denies, in each case, is that the intellect uses its essence as a means of cognition – as that by which (*quo*) it cognizes either itself or other things. This is the most basic sense in which Aquinas affirms the *De anima*'s maxim that "the intellect cognizes itself just as it does other things" (87.1sc, paraphrasing 430a2–3).

To understand the argument of 87.1, it is helpful to look at 84.2. In that earlier article, Aquinas is concerned with refuting a rather peculiar and implausible view: that the soul contains within itself, as part of its nature, the very things that it apprehends in the external world. Aquinas, following Book I of the *De anima* (fresh in his mind from his recent commentary), attributes this view to various pre-Socratic philosophers. The view was not that the mind literally contains rocks and turnips and all the things we think about, but that the mind contains the basic principles (fire, water, etc.) that somehow come together to make up material things. So "in order to attribute cognition of all things to the soul, they claimed that it has a nature common to all things" (84.2c).

This peculiar approach is based on two principles, one of which Aquinas regards as sound, the other as erroneous. First, the ancients correctly embraced a resemblance theory of mental representation. Their basic premise was "that like is cognized by like" (84.2c). Where the ancients went wrong was in their assumption "that the form of the cognized thing is in the one cognizing in the very way it is in the thing cognized" (ibid.). This principle pushes the resemblance doctrine too far. The form of the object must be in intellect somehow, so as to guarantee a likeness

between intellect and object. But the form can be instantiated within intellect in various ways; what is required is resemblance, not sameness, and *resemblance* must be understood in the broadest terms. (I discuss this in *Theories*, ch. 3.)

The pre-Socratics, by going wrong on this point, were led to materialist theories of mind: “since they held that the things cognized are bodily and material, they claimed that those things must exist materially even in the soul that is cognizing” (84.2c). From Aquinas’s perspective, this is a fundamental mistake, because in fact materiality precludes cognition. Mere similarity of any sort is obviously insufficient as an explanation of cognition: “if the soul were to cognize fire through fire, then even the fire that is outside the soul would cognize fire” (84.2c). What needs to be added, Aquinas thinks, is some account of *how* the agent receives the thing’s likeness, and he spells this out in terms of immateriality. “The more immaterially that something has the form of the thing cognized, the more perfectly it cognizes” (84.2c). Immateriality, in fact, is a sufficient condition for being cognitive.¹

Early chapters have explored various aspects of the soul’s immateriality (esp. §§2.2, 2.3, 10.3, and 10.4). What is important here is the way Aquinas uses this result to reject the ancient thesis that external things are cognized through the soul’s essence:

If there is some intellect that through its essence cognizes all things, its essence must have all things within itself, immaterially. . . . But this is unique to God, that his essence contains all things immaterially, in the way that an effect preexists, virtually, in its cause (84.2c).

For the intellect to apprehend the external world through its essence would require that it contain, as part of its essence, the forms of all things, immaterially. This is precisely how the divine intellect works. But it does not hold true for the human intellect, or even for an angelic intellect. So the intellective soul must apprehend external material things by somehow taking in information from the world. This information comes in the form of intelligible species.

This last conclusion is not explicitly stated in 84.2, but we know it follows based on the title of the article (84pr): “Does the soul understand bodies through its essence or through species?” Aquinas simply rules out the first, and hereafter (e.g., in 84.3) takes for granted that the intellect works through species. It is revealing that he sees no need to make an explicit defense of species, because it suggests that he views them in the most innocuous light. In another fifteen years the theory of species would come under attack as unnecessary and epistemologically dangerous (see *Theories*, chs. 5–7). Aquinas’s casual disjunctive assumption – either *per essentiam* or *per species* – implies that we should speak of knowing through species whenever the mind works by taking on accidental forms. This means merely that the intellect cannot understand the world on its own, of its own intrinsic nature, and that it must be supplied with further infor-

mation about the way things are. So understood, the notion of species does seem entirely unobjectionable. (Of course, plenty of room for disagreement remains over the rest of Q84, and into Q85, where Aquinas works out the way in which these species are acquired (see §10.2) and used (see §§9.3, 10.3, and 11.2 below).)

When Aquinas comes to Q87, he turns from our knowledge of external things to our knowledge of ourselves. Here it becomes much more reasonable to suppose that the intellect works “through its essence.” Even if the mind does not, of its essence, contain immaterial likenesses of all things, it still seems that the mind ought to be able to understand *itself*, simply by looking within, at its own nature. Aquinas allows that angels do operate in this manner (56.1), but he holds that human beings do not:

Our mind cannot understand itself in such a way that it immediately apprehends itself; rather, as a result of apprehending other things, it comes to a cognition of itself (*QDV* 10.8c).

The mind does not know itself *per se* in the way that first principles are known *per se* – where “one comes to know it through nothing else” (87.1 *ad* 1). We simply have no such direct access to the mind.

The Treatise offers an argument for this conclusion:

The human intellect belongs to the genus of intelligible things as a merely potential being (in just the way that prime matter belongs to the genus of sensible things). This is why it is called the *possible* intellect. Considered in its essence, then, it is potentially cognizant. So it has of itself the power to cognize, but not to be cognized, except inasmuch as it is made actual (87.1c).

The intellect, in its unformed state, is only potentially intelligible; as a *tabula rasa* the intellect has the capacity to cognize, but not to be cognized. The intellect is itself intelligible only when it is informed by intelligible species, and even then it is intelligible only through those species, not directly.

The comparison with prime matter might suggest that Aquinas means to deny the independent reality of the intellect’s essence. On any interpretation of Aquinas, it is clear that prime matter does not exist without form (§1.4), and so if the analogy were taken strictly we would have to conclude that the possible intellect does not exist without intelligible species. On this reading, it becomes easy to see why Aquinas denies the intellect any direct grasp of its underlying essence. For in some sense it seems that the possible intellect’s essence would just be its thinking. Possible intellect, when not engaged in thought, would simply cease to exist; there would be no enduring essence to understand. The argument of 87.1 would thus be based not on an epistemological point but on an eliminative account of possible intellect’s nature.

It is clearly too much to say that the possible intellect exists only when it is thinking. This clashes with Aquinas's account of intellectual memory, which he bases on the intellect's capacity to preserve a dispositional grasp of intelligible species even when not actually considering those species (79.6). The most one could maintain, then, is that the possible intellect did not exist before it began to take in information from the world. Aristotle sometimes gives the impression that this is his view: intellect, he says, "is not actually, before it thinks, any of the things there are" (*De an.* III 4, 429a24); "intellect is intelligible things potentially, in a way, but it is nothing actually before it operates" (429b30–31). It seems clear enough that Aquinas does not want to go even this far. He reads Aristotle as holding not that the intellect is "nothing actually before it thinks," but that it is "nothing of those intelligible things . . ." (*InDA* III.9.48),² where what is *intelligible* are the natures of bodies, the primary objects of intellect (§10.1). So the intellect has a nature, on Aquinas's view, but not a corporeal nature. (This is how 75.2 establishes the intellect's immateriality (§2.2).) The intellect is actualized once it begins to grasp such natures; until then, it has merely the potential to be so informed. Still, this potentiality is itself the intellect's essence, as 87.1c implies: "considered in its essence, it is potentially cognizant. So it has of itself the power to cognize." It is this essentially receptive nature that we cannot directly apprehend.

The analogy to prime matter should therefore be understood epistemologically, not metaphysically. In other words, the comparison is not to prime matter's nonexistence apart from form, but to its unknowability apart from form. (Compare, e.g., *InPh* I.13.118: "Prime matter cannot be known through itself.") But now it becomes hard to see how the argument of 87.1 runs. It begs the question to hold simply that the intellect's proper objects are the natures of corporeal things. What is needed is an *argument* for why the intellect does not have its own nature as one of its proper objects. That argument is there, however, implicit in the analogy to prime matter. It is true of both prime matter and the possible intellect that they can perform an action only when supplied with some form. As a result, "our possible intellect cannot understand anything before it is perfected by an actually intelligible form. . . . Nor can it understand itself except through an intelligible form actually existing within it" (*QDV* 8.6c). The possible intellect's passivity is what ensures this result: "Our intellect's operation consists in being acted on in a certain way" (79.2c). Until it is acted on, the intellect remains a *tabula rasa*: "we are at first only potentially cognizant, whereas later we are made to cognize actually" (79.2c). Consequently, the intellect cannot simply choose to begin thinking from scratch; it thinks only when supplied with information about the world. This is true even as regards self-knowledge. The intellect, because of its passivity, has no way of looking directly within itself, no more than it has the ability to reach out on its own and grasp the natures of material things.

Intellect must be *made* actual, by receiving information. In this life, that occurs through phantasms, via the five senses.

Again, however, it begs the question to claim simply that the intellect must receive its information through phantasms. What we want is a reason why the intellect could not be informed by its own essence. There is no conceptual impossibility in an intellect's working this way: for an angel, as for God, "the first object of its cognizing is its essence" (87.3c). There is not even any conceptual impossibility in the *human* intellect's working this way: once separated from its body, "it will understand itself through itself" (89.2c). But this is not possible for an embodied human mind. Because of "the weight and distraction of its body" (89.2 ad 1), the embodied mind is entirely oriented toward the material sensible world. Its information comes through phantasms, not through direct acquaintance. As evidence of this orientation, Aquinas points out that the intellect is not always actualized. Aristotle had raised this issue as a puzzle for the claim that the intellect can apprehend itself: if it can do that, then "we must find out why it is not always thinking" (*De an.* III 4, 430a5–6). Aristotle himself never clearly resolved that puzzle, but Aquinas does, by blocking the mind's direct access to itself. If the embodied intellect were actually intelligible, then it seems that it would constantly be thinking about its own essence, from the first moment of its existence. This is precisely how things are for God, and even for an angelic intellect, which "is always in actuality with respect to its intelligible objects" (79.2c). But it is absurd to suppose that the embodied human intellect works in this way. If so, then before having any thoughts about the external world, a child's intellect ought to have a grasp of its own nature, and to think about itself continually: "If the soul cognizes what it is *through itself*, then it will *always* actually understand about itself what it is" (*SCG* III.46.2228). Since this is obviously not the case, Aquinas concludes that the embodied intellect itself is not actually intelligible. The mind's own nature is not open to it, but lies behind its thoughts, not directly accessible.

In denying that the intellect has any immediate understanding of its own nature, Aquinas places himself in what is now the philosophical mainstream. David Hume is perhaps most responsible for the present consensus, with his famous attack on "some philosophers, who imagine we are every moment intimately conscious of what we call our Self" (*Treatise* I.iv.6, p. 251). Hume's own view is that "I never can catch *myself* at any time without a perception, and never can observe any thing but the perception" (p. 252).³ In §1.1 this line of thought seemed to pose a threat to Aquinas's project of explaining human nature in terms of soul. Now we can see that, far from being threatened, Aquinas would endorse Hume's remark as an important insight into the nature of mind. In this life, we have no direct acquaintance with the mind's nature; the best we can do is work our way toward an understanding, beginning with the mind's objects and the thoughts to which those objects give rise.

Of course, Aquinas and Hume do not agree for long. Hume's strict empiricism leads him to push these insights to their radical extreme: the mind, he contends, is merely a "bundle or collection of different perceptions" (p. 252). We can have no idea of any further underlying self, and so we should reject the self as a "fiction" and "imaginary" (p. 262). Because Aquinas's form of empiricism is more flexible, he has the resources to reach more plausible conclusions. Although an embodied mind lacks direct awareness of its essence, it can make some progress at understanding its essence indirectly. Our method must be the same as that used in apprehending other essences (§§5.5 and 10.5) – this is another sense in which Aquinas affirms the governing Aristotelian maxim, that "the mind is itself intelligible, just like other intelligibles" (*De an.* 430a2–3).⁴ We must work our way from the outside in, beginning with external appearances and working toward the soul's essential nature. I now turn to the details of this indirect method.

11.2. Reflection, not introspection

Here is a thumbnail sketch of the indirect method of self-knowledge that Aquinas defends:

In cognizing the soul we must advance from things that are more external, from which the intelligible species are abstracted through which the intellect cognizes itself. In this way, then, we cognize acts through objects, capacities through acts, and the essence of the soul through its capacities (*InDA* II.6.180–86).

Although the details are far from clear, we can begin by tracing the five steps that seem involved as we make our way from the outside in:

Objects → *Species* → *Acts* → *Capacities* → *Essence*

The argument of 87.1 was that the soul's *essence* must come last in this series. But how do we get there at all? The remaining articles of Q87 ask the following:

- a2. How does the intellect cognize the dispositions (*habitus*) existing within it?
- a3. How does the intellect cognize its own act?
- a4. How does the intellect cognize the act of will?

This looks surprisingly unhelpful, inasmuch as it ignores two members of the series, species and capacities, and instead asks about issues that look peripheral: dispositions and acts of will. As usual, however, it is not hard to find the reasons behind Aquinas's choices. He is interested in dispositions and acts of will, because these are two aspects of the mind that are central in the second part of *ST*, when the focus shifts to ethics (see §In.5). He does not ask about species and capacities, because he takes himself to have already addressed these topics in earlier questions:

77.3. How are the soul's capacities distinguished?

85.2. Are intelligible species abstracted from phantasms related to our intellect as that which is cognized or as that by which something is cognized?

So it should be possible to piece together Aquinas's full account, based on his earlier discussions of objects (QQ84–86), species (85.2), and capacities (77.3), plus the discussions in Q87 of the soul's essence (a1) and its acts (a3).

In sorting out these issues, it is useful to attend to a distinction Aquinas regularly draws between two levels of self-knowledge. In 87.1c, after reaching his principal conclusion that "our intellect cognizes itself through its act, not through its essence," he goes on to explain that "this occurs in two ways." He then distinguishes:

- (α) everyday, individual self-knowledge, where "Socrates or Plato perceives himself to have an intellective soul, as a result of perceiving himself to be using intellect";
- (β) a general investigation into the nature of the human mind, requiring "diligent and subtle investigation."

This Treatise exemplifies the kind of work that goes into β, and so in many ways it is the less mysterious of the two levels. Aquinas has relatively little to say about the α level, and its status is puzzling in a number of ways. The following passage describes α-level reasoning more fully:

... [T]he soul is cognized through its acts. For someone perceives himself to have a soul, to live, and to exist, in that he perceives himself to sense, to use intellect, and to carry out other such living functions (QDV 10.8c).

Here awareness of one's actions entails not just an awareness of the corresponding capacity but, more generally, an awareness of soul, of being alive, and of existing.

How exactly does this entailment work? Need one make an explicit (or implicit) inference? Presumably not, since Aquinas speaks here of one's *perceiving* rather than, say, *reasoning*. It's easy to see why he might resist the latter: the sort of self-knowledge he describes seems so direct and obvious as to make any appeal to reasoning look misguided. Anything that acts, exists; anything that senses or thinks, lives; anything that lives, has a soul. If I can perform intellectual acts, then I have an intellect. If I can see, then I have sight. Performing the action entails the capacity to perform the action. If some more sophisticated defense were wanted, we could appeal to the principle that "capacities are distinguished in terms of their acts and objects" (77.3sc; §6.2), and reason from there. But it's absurd to suppose that this sort of β-level move is required for our ordinary, casual knowledge of ourselves. It is precisely Aquinas's point, in distinguishing these two kinds of inquiry, that self-knowledge of the familiar, personal sort does not depend on the "diligent and subtle investigation" of philosophers and theologians.

It is instructive to compare Aquinas's α level with the Cartesian *cogito*. Like Aquinas, Descartes takes an action (thinking) to imply a state (existing). Commentators have long been puzzled by the status of Descartes's reasoning. He denies that it stands for an incomplete syllogism that must be supplemented by a minor premise to the effect that *If I think, then I exist*. But at same time he concedes that our ability to reason in this way rests on prior knowledge about thinking, existence, and the relationship between the two. As a result, it is never clear what gives this principle the kind of absolute certainty that Descartes requires to overcome his radical doubts. Generations of scholars have strained to see how the *cogito* could possibly bear the kind of weight Descartes gives it.⁵

Aquinas is even less explicit than Descartes about what gives our α -level judgments their certainty. He does, occasionally, acknowledge that certainty: "knowledge about the soul is most certain insofar as each of us experiences in himself that he has a soul, and that the soul's acts are within him" (*QDV* 10.8 ad 8 sc; see also ad 2). But these remarks are made in passing, as replies to objections. It's not part of Aquinas's project to give self-knowledge a foundational role, and so it is not particularly important to him that α -level beliefs be given an infallible justification. Moreover, because this knowledge is not foundational, Aquinas can call on the β level to justify our pretheoretic, α -level judgments. Anyone who wants to challenge the validity of α -level reasoning, in dogged Cartesian style, thereby elevates the discussion to the β level: anyone who doubts the link between soul and life can read the *De anima*; anyone who questions the inference from using intellect to having intellect can read Q77 on the soul's capacities. Such β -level inquiries reaffirm and perhaps occasionally override our ordinary α -level judgments about ourselves, but they are not prerequisite for those ordinary judgments.⁶

Descartes runs into questions not just at *ergo sum*, but even at the initial *cogito*. How is it, exactly, that I know with certainty that I am thinking? Aquinas faces the same question in accounting for how one "perceives" oneself to sense and think. At the outset of this section, I listed the following stages of self-knowledge:

Objects \rightarrow *Species* \rightarrow *Acts* \rightarrow *Capacities* \rightarrow *Essence*

This doesn't seem to suit the α -level, which was described entirely in terms of the third and fourth stages:

Acts \rightarrow *Capacities*

("Socrates or Plato perceives himself to have an intellective soul, as a result of perceiving himself to be using intellect" (87.1c).)

Certainly, the α level won't reach the intellect's *essence*. And it seems to make no use of *objects* and *species*, but to begin straightaway with a perception of the soul's acts.

So the five-step account may seem to characterize only the β level. But that is not entirely right. Aquinas does not suppose, even at the α level,

Contra Averroistas

One of the most serious challenges to Aquinas's move from acts to capacities comes from the Averroistic doctrine that all human beings think by means of a single, separated possible intellect (see §5.3). In 76.2c he replies that if I did not have my own intellect, then I could not be said to be thinking on my own.

If there is a single intellect, then no matter how different the other things are that intellect uses as instruments, there is no way in which Socrates and Plato could be said to be anything other than a single person engaged in thought.

The inference seems plausible, but why not simply grant the conclusion? Doesn't Aquinas still need to establish that his thoughts are his own, not just aspects or modes of some larger, universal mind?

In the context of radical Cartesian doubt, this will look like a perfectly reasonable suggestion. But Aquinas would deny that that context is always the appropriate one. Whereas the Cartesian method holds all knowledge hostage to our ability to resolve an endless series of pedantic doubts, Aquinas points toward an epistemic division of labor between ordinary knowledge and exact science. For everyday, α -level purposes, I need not worry about such obscure and doubtful possibilities. Moreover, though it is interesting to see whether all such possibilities can be ruled out at the β level, Aquinas does not seem to insist that this subsequent task *must* be completed for the α level to be valid. Hence he doesn't hesitate to help his β -level theological inquiry along by invoking α -level premises, as needed.

that the mind immediately grasps its own actions. Even here, the first two stages

Objects \rightarrow *Species*

play a crucial role. Let's first consider the role of intelligible species. In one respect, we might well expect such species to be left out of the α -level account. After all, the notion of any sort of inner mental representation (species, ideas, sense data) is a philosophical notion, not a part of our common-sense image of ourselves. Intelligible species should have an explicit place only at the β level, through considerations like those advanced in §11.1. But at the same time, the thesis of 87.1 was that self-knowledge comes "through species." I take Aquinas to be speaking generally, about all kinds of self-knowledge, when he writes:

powers only marginally suits the α level, and comes into its own as a powerful theoretical tool only at the β level (witness all of Part II of this study). The prior move from *objects* to *acts* is much more interesting: it's here that the distinctive and appealing character of Aquinas's account emerges.⁸ Aquinas insists that knowledge of one's own mental acts comes indirectly, as a consequence of our apprehending external things. This is why the path to self-knowledge always begins with external *objects*. First, we understand something of the nature of the material world, and then "secondarily, the act is cognized by which the object is cognized" (87.3c). Part of Aquinas's reason for making self-knowledge consequent on apprehending external things is the familiar point that the mind cannot be understood until it is made actual (§11.1). Thus "our intellect cognizes itself insofar as it is made actual through species abstracted from sensible things through the light of agent intellect" (87.1c). In the present connection, this amounts to nothing more than the obvious point that we cannot perceive the mind at work unless the mind actually is at work, thinking about something: "One perceives that one is thinking only as a result of thinking about something, because thinking about something comes before thinking that one is thinking" (*QDV* 10.8c; see *InMet* XII.8.2539). In this way, the move from object to act is required simply because every act must have an object.

Some of Aquinas's remarks suggest merely this sort of temporal priority. Thus he approvingly reports, "the Philosopher says that objects are cognized before acts, and acts before capacities" (87.3c). But it's clear that Aquinas wants to make not just this temporal claim, but a stronger causal or evidential claim: that we apprehend the soul's acts in virtue of apprehending its objects.

For it is clear that *as a result* of cognizing something intelligible, the intellect cognizes its own intellection, and *through* its act it cognizes its intellectual capacity (14.2 ad 3).

This stronger evidential claim is what gives Aquinas's account its distinctive character.

To see what's distinctive in Aquinas's account, it is helpful to consider one sort of view that he is implicitly rejecting: the sort that appeals to some kind of inner sense, or to an act of introspection. Locke's classic account describes our "observing in our selves" the various operations of our mind: "though it be not Sense, as having nothing to do with external Objects; yet it is very like it, and might properly enough be call'd internal Sense" (*Essay* II.1.4). On this account, we first attend to the external world, then we turn our attention inward, to catch the mind in the act of thought. The actions of intellect are themselves the objects of a secondary, inward-directed attention.

Aquinas has good reasons to reject this view. First, it violates his prohibition on the intellect's comprehending more than one thing at once (85.4c), inasmuch as it seems essential to the introspective model that the

intellect be thinking about something and at the same time be perceiving that act of thinking. Aquinas agrees that these are two separate acts – “there is one act by which the intellect cognizes a stone, and another act by which it cognizes itself cognizing the stone” (87.3 ad 2) – and for that reason he cannot think they happen concurrently.⁹

Second, whereas the introspective model implies that we can look within ourselves and form an idea of our own mental acts, Aquinas denies that self-knowledge involves any further, special idea of ourselves or our own actions. Locke describes introspection as serving to “furnish the Understanding with another set of *Ideas*, which could not be had from things without” (*Essay* II.1.4). For Aquinas, this is doubly wrong: there is no further set of ideas, derived directly from mind, and what ideas we have of mind, we have precisely from things without.

The soul is present to itself . . . not as understood through itself, but from its object. . . . The soul is cognized not through another species abstracted from itself, but through the species of its object (*QDV* 10.8 ad 4–5 sc).¹⁰

In denying that the intellect forms a species of itself, Aquinas means that we do not apprehend our own perceptions and thoughts by turning away from the external world, looking within, and thereby discovering what’s going on inside. The intellect perceives its own acts, as Aquinas puts it, but not through a second round of images or ideas. Instead, we apprehend what we are seeing, or what we are thinking, by attending in a special way (see below) to the content of those original states.¹¹

Reflection as Locke conceives of it is a dead end, because we lack any such introspective capacity. In this respect our mental lives are quite different not just from the mental life of God, but even from that of the angels. Unlike their intellects, ours are naturally oriented outward, toward external things:

The human intellect neither is its cognizing, nor has its own essence as the first object of its cognizing. Instead, something external, the nature of a material thing, is its first object (87.3c).

Here Aquinas remarks that “secondarily, the act is cognized by which the object is cognized.” Again, the point is not merely temporal, that we have to be thinking about the world before we can look within, introspectively. The point, instead, is that we entirely lack the power for direct introspection. Our cognitive capacities are fixed on external things, and so the only way we can understand ourselves is indirectly, by what he refers to as *quaedam reditio* (a kind of return):

The power of every capacity of the soul is fixed on [*determinata ad*] its object, and so its action first and principally tends toward its object. But it can [be directed] at the things directing it toward its object only through a kind of return. In this way we see that sight is first directed at color, and is not directed at its act of vision except through a kind of return, when by seeing color it sees that it sees (*QDV* 10.9c).

One sees that one sees not by turning one's attention inward, but simply "by seeing [*videndo*] color." At the sensory level, this presumably occurs through the common sense (see §6.4). But as an immaterial power, the intellect is capable of genuine reflection on itself (see **Proclus on Reflection**, p. 194): first it engages in an outwardly directed act, then it attends to external things in a special reflective manner. One sign that the process is indirect in this way is that brain damage can prevent us from apprehending even our own minds (*QDSC* 2 ad 7). Just as the intellect needs the brain's sensory organs for knowledge of external things (§§9.3 and 9.4), so it needs them for self-knowledge.

Aquinas extends this line of thought to his discussion of the mind's knowledge of its own dispositions and species. To the objection,

the soul's dispositions are present in the soul through their essence; therefore they are cognized through their essence (87.2 obj.2),

Aquinas replies:

Dispositions are present in our intellect not as the objects of intellect, but as the things by which the intellect cognizes. For the object of our intellect, in its state of life at present, is the nature of a material thing (87.2 ad 2).

Again, the intellect's attention is fixed on external things; the inward mechanisms of thought are simply not candidates for direct apprehension. The same holds for our understanding of intelligible species. Here Aquinas considers a more complex argument:

The intellect cognizes an intelligible species within itself, but it cognizes it through its essence, not through another species, because if the latter then this would go on forever (*QDV* 10.9 obj.10).

To this he might have replied that there is nothing objectionable about a regress that is only potentially infinite. (So he does reply to an analogous argument at 87.3 ad 2.) Instead, he takes the opportunity to make a deeper point about the way the intellect comes to know its inner states:

The intellect cognizes an intelligible species not through its essence, nor through any species of a species, but by cognizing the object of which it is a species, through a kind of reflection (*QDV* 10.9 ad 10).

The distance between Aquinas and Locke should be evident. Whereas Locke takes our ideas to be the things we are directly acquainted with, and takes the external world to be known at second hand, Aquinas maintains precisely the contrary. A species can be known neither "through its essence" nor through another species, but only by "a kind of reflection." Reflection, for Aquinas, is not an introspective turning away from external things, but a certain way of looking at external things: it is an outward look that is reflected back within. Hence the intelligible species is the secondary object of intellect; "what is cognized primarily is the thing that the intelligible species is a likeness of" (85.2c). The mind's knowledge of

Res ipsae

Aquinas's views about self-knowledge are driven by his insistent realism: that what we think about and perceive are things in the world, not in ourselves. There is a trade-off: the more we suppose that the contents of thought and perception depict the external world, the harder it becomes to see how reflection on that content can reveal features of the mind. If, like Locke, we stress the gap between appearances and reality, then reflecting on appearances will seem to be a way of reflecting on ourselves.

Isn't Locke right? The world simply is not the way we perceive it to be: the various sensible qualities are not really out there, at least not the way we think they are. As Democritus said, everything is particles in motion and empty space. So it may seem that Aquinas has things backward: that it is the external world we understand at second hand, and that what we are directly acquainted with is the subjective features of our own mind: the impressions generated in us when we are confronted with patterns of sensory stimuli.

Not so fast. Even if we grant, with Locke and against Aquinas, that (at least in many cases) "there is nothing like our *Ideas*, existing in the Bodies themselves" (*Essay* II.viii.15), it still does not follow that reflection on those ideas gives us any direct insight into the operations of the mind. For if these ideas (species) are not likenesses of external things, they are certainly not likenesses of anything in the mind itself. By reflecting internally we can reach certain conclusions: that we are thinking or perceiving, and that the content of that thought or perception is such and such. Still, our ideas (species) tell us nothing, directly, about the nature of mind. In contrast, such ideas (species) give us vast amounts of information about the external world. Even if there is nothing in the external world like our ideas (species) of color, still visual perception provides a staggering amount of information about the world. When we see the traffic light turn from red to green, it's hard to see why it matters whether the light *really is green*. Regardless, we have acquired important information about the world. In putting the external world first, Aquinas seems to have gotten this just right.

species is secondary in just the way that its knowledge of its own act is: not because it comes later in time, but because it comes indirectly, through thinking about external things in a reflective, self-conscious manner.¹²

Aquinas's account points to the heart of what is wrong with the Lockean model of introspection. But in certain respects his view is quite obscure,

particularly when he appeals to “a kind of return” or “reflection.” In part, the appearance of obscurity is real, and follows from the fact that he takes consciousness for granted. Aquinas does not have a theory of consciousness (§6.4), and his account of self-knowledge in Q87 is not an attempt to formulate one. We are conscious of our thoughts and sensations from their beginning, before there is any question of higher-order reflection. It is sometimes proposed that conscious thoughts are those that are the object of second-order thoughts, which are not themselves conscious, unless they are the objects of third-order thoughts (see, e.g., Rosenthal 1996). For Aquinas this gets things backward, because our ability to think about our own thoughts *presupposes* that those thoughts are conscious.

When Aquinas says that our awareness of our own actions comes “through objects,” he means that we make such higher-order claims in virtue of having conscious first-order thoughts about the world. It is not that we directly introspect these first-order thoughts, but that our ordinary conscious awareness of the one provides the ground for a step back and a further thought with the original thought as its content. (I refer below to this process as *cognitive ascent*.) If we allow ourselves to take consciousness for granted, then we can give a relatively straightforward account of the notion of reflection. We can say that to reflect on a thought is simply to make a cognitive ascent, from *thinking that p* to *thinking that I am thinking that p*. There seems nothing particularly puzzling about this. A first thought, with the content:

(1) *The cheese is moldy*

can lead to a second, higher-order thought with the content:

(2) *I am thinking that the cheese is moldy*

just as it can lead to thoughts with other contents, e.g.,

(3) *I bought the cheese two weeks ago.*

In no case do I directly grasp the initial thought in the way that the introspective model suggests. What happens is simply that one thought gives rise to another, in the familiar way we constantly experience. In some contexts my thoughts will turn toward dates of purchase, in other contexts I will be led to reflect on my current state of mind.¹³ Aquinas offers the analogy of looking into a mirror:

Through a likeness within vision obtained from a mirror, one’s vision is directly drawn to cognize the reflected object; but by turning back in a way it is drawn through that same [internal likeness] to the likeness that is in the mirror (*QDV* 2.6c).

To look at the mirror rather than the object requires merely a shift in one’s attention. The turn from thinking about the world to thinking about our own mental states requires the same sort of shift.¹⁴ No mysterious introspective insight is needed to produce what Locke called “another set of

A paradox about self-knowledge

A thought with the content:

(2) *I am thinking that the cheese is moldy*

cannot ever be true – at least not given Aquinas’s quite plausible prohibition on thinking more than one thing at a time (85.4c). I can of course have a thought with the content

(1) *The cheese is moldy.*

And I can equally well have a thought with (2) as its content. But a thought with (2) as its content immediately drives out of my mind the thought with (1) as its content. Hence the process of cognitive ascent falsifies itself. (In the face of this sort of worry, Descartes would simply deny that the mind can think only one thought at a time (Conversation with Burman, p. 335 [AT V, 149]).)

It might seem that I can *know* that I am thinking that the cheese is moldy. Knowledge, like belief, is a dispositional state, and so need not involve an actual thought. (We all know lots of things that we aren’t thinking about.) But is even this right? It doesn’t seem that I could have dispositional knowledge about what I am thinking about right now. Dispositions must be acquired over time, after all, and so it seems that I can have dispositional knowledge only with regard to facts acquired in the past. Any knowledge about my passing stream of consciousness must be actually conscious, at this moment. But by being actually conscious, it drives away all other thoughts, and so falsifies itself.

One of the oldest arguments for skepticism claims that the constantly changing nature of the physical world makes all knowledge of the world impossible. One might reply that at least a momentary knowledge of the world should be possible. But can there be such a thing as knowledge that lasts for only a moment? How short a moment? And can we be sure that the world stays still for that long? Perhaps a better reply is to hold that we can at least have knowledge about what the world was like a moment ago, and the moment before that, and so on, as far back as our records extend. Something similar seems to be true as regards knowledge of our own minds. I can know what I thought a moment ago, but I can never know what I am thinking. Language reflects this odd result to some extent. When someone asks me what I am thinking about, I’m likely to answer in the past tense: “I *was* (if you must know) thinking about cheese.”

A broader conception of knowledge helps deal with these oddities. Can I be said to know a proposition that I am not presently think-

continued

ing about and never have thought about? Surely, I know many things that I have never thought about, such as the answers to various trivial math problems. I have this knowledge, it seems, in virtue of having the immediate ability to discover the correct answer. This suggests a broader sense in which knowledge is dispositional, and in this sense I can know what I am thinking about.

ideas.” Reflection, as illustrated in the transition from (1) to (2), seems no more puzzling than the transition from (1) to (3).

Now there is this important difference between the two cases: whereas thought (1) does nothing more than prompt the occurrence of (3), (1) provides the ground for (2). Thought (2) can count as knowledge only insofar as I have reliable access to (1). That access is insured by (1)’s being conscious. If consciousness is not reliable, then I cannot be said to know what I am thinking about. Since Aquinas provides no account of consciousness, let alone an evaluation of its reliability, he leaves in doubt the validity of the move from objects to acts. But since he is not here engaged in the project of identifying infallible foundations for all knowledge, this is not a critical failing.

One might object that this is not really an account of self-knowledge: that the hard problem, conscious awareness, is simply taken for granted, and that cognitive ascent is a relatively uninteresting by-product of such awareness. In a way, this seems right. But it seems more fair to say that Aquinas *is* giving us an account of self-knowledge, and doing so in a way that simply brackets the issue of consciousness. Conscious awareness is a general phenomenon that occurs even when our thoughts are directed entirely outward. Self-awareness is a special case, and Aquinas is offering an account that handles the special case, couched in clear terms that invoke no mysterious introspective faculties.

11.3. The middle ground

I now want to situate Aquinas’s account in the context of recent philosophy. In a 1903 paper, G. E. Moore wrote that the sensation of blue seems to be “transparent”: “When we try to introspect the sensation of blue, all we can see is the blue: the other element is as if it were diaphanous” (1922, pp. 20, 25). Gilbert Harman has recently enlarged on this observation:

When you see a tree, you do not experience any features as intrinsic features of your experience. Look at a tree and try to turn your attention to intrinsic features of your visual experience. I predict you will find that the only features there to turn your attention to will be features of the presented tree (1990, p. 39).

Aquinas explicitly recognizes this transparency of our inner states, and constructs around it a compatible theory of self-knowledge. In doing so, he stakes out a middle ground that, despite its attractive prospects, seems strangely underpopulated. To one side lie the introspective accounts of Locke and others, which hold out the promise of direct insight into the mind – if not into its very essence, then at least into its actions and states. Although such accounts are not currently in vogue, they dominated the early modern period, and were influential in the thirteenth century as well. Peter John Olivi, for one, scorned Aquinas's Aristotelian approach. He insisted that "the mind, through itself, immediately senses and feels [*palpet!*] itself" (II *Sent.* Q76, p. 146) and consequently "knows itself through its essence – that is, through its attention and act being immediately fixed on its essence" (p. 149). This account of self-knowledge squares with Olivi's general methodological approach, which often approaches a kind of phenomenology. In trying to express the sort of introspective knowledge Olivi feels we have, he resorts to the most florid language, as when in discussing free will he remarks that "we experience with a kind of inner sense that our heart has a mode of existence that is thoroughly stable and strong, thoroughly internal and secret, thoroughly upright and dominant" (Q57, p. 334). All of this, in reference to the will!¹⁵

Aquinas's quite different method squares with his own account of self-knowledge. In article after article, rather than attempt to describe directly the workings of his own mind, he begins with what we think about and what we do. The unity of mind and body, for example, grows out of the fundamental premise that "each one of us experiences that it is oneself who thinks" (76.1c; §3.1). His account of sensation depends on a careful analysis of *sensibilia* (§6.3). Free will is grounded in the range and complexity of human behavior as compared with animal behavior (§§7.2 and 7.3). The need for phantasms in thought rests on the mind's orientation toward the external, material world (§9.3). In none of these cases does Aquinas ask us to look within ourselves to grasp the subjective character of an experience. He asks us to attend to what we are thinking about, what we are perceiving, and what we are doing; on the basis of these facts, he develops an account of how we do it.

This approach is so out of favor today that even many Thomists have been unwilling to take his account of self-knowledge at face value. Despite Aquinas's having repeatedly stressed that the mind knows itself through objects, via species of other things, it has seemed to many of his readers that he cannot possibly mean it. According to Ambroise Gardeil, "the soul, through itself, grasps itself. . . . It perceives itself directly at the source of its intellectual acts" (1934, p. 236). John Ruane further stresses the directness of this awareness: "a species serves to render an absent object present to the intellect; the soul, however, is already present to itself and requires no such species in order to know itself" (1958, p. 428). This is, to be sure, not what Aquinas says,¹⁶ but it has seemed to many to be what he needs to say. Gaston Rabeau points to some of the underlying motivation in

remarking, "If there were nothing other than the presence of a *species* – immobile, limited, exclusive – then there would be no awareness of myself. . . . The informed intellect grasps itself. . . . the essence of the soul is present to itself" (1938, p. 90).¹⁷

The worry is that Aquinas will be unable to give an account of human beings as persons. Instead of a human person we would have Hume's bundle of experiences; instead of Descartes's *I think* we would have Lightenberg's *It thinks*. It is reasonable to look to Aquinas for at least some of the resources to handle these objections. But challenging empiricism on its own terms is bound to fail. There is nothing in Aquinas's account to license any sort of direct experiential awareness of the self. On strictly empiricist grounds, the Humeans win the day. The move Aquinas must make is to reject the underlying empiricism, and this is precisely what he does:

The judgment and efficacy of this cognition through which we cognize the soul's nature is available to us in virtue of our intellect's light being derived from the divine truth, in which the natures of all things are contained (87.1c).

At this point Aquinas refers back to his earlier discussion of divine illumination (84.5; §10.2), and then quotes Augustine's *De trinitate* (IX.vi.9): "we grasp the unshakable truth, and on this basis we define, as completely as we can, not how the mind of each human being is, but how it ought to be, in the eternal natures."

Although Augustinian illumination may seem out of place here, it has its purpose. (It is invoked in just the same way in the parallel treatment of *QDV* 10.8.) Aquinas is stressing that the road from the soul's objects, through its acts and capacities, all the way to its essence, is long and obscure, and cannot be traveled on strictly empiricist grounds. It was Hume's mistake to try to make that journey, and the result is an account of human nature that seems to leave out much of what makes us human. Instead of appealing to some sort of mysterious introspection of the self, Aquinas invokes the (no doubt equally mysterious) "light" of agent intellect. By this light we understand all things, but it itself cannot be understood (88.3 ad 1). Aquinas is in fact not equipped to give any account of agent intellect, other than by appealing to its origins in the divine truth (§10.3). All of this may well strike modern readers as an unnecessary embarrassment, best passed over in silence. I don't propose to defend this aspect of Aquinas's view; I don't see how to develop it, even. But it is important nonetheless to recognize that these Augustinian gestures carry real weight for Aquinas. His theory is incomplete without them.

If the introspective model lies to one side of Aquinas's middle ground, then to the other lie behaviorists and their offspring – all those who mistrust appeals to inner states and conscious awareness. Views of this sort, despite their eccentricity, were ascendant for much of the twentieth century. Certain remarks by Wittgenstein encouraged suspicion regarding "private objects" of thought. Ryle went further in denying that a person

has "Privileged Access to facts of a type inevitably inaccessible to the listener." On his view, one learns what one is thinking in the same way that one learns what others are thinking: by observing one's behavior and listening to what one says.¹⁸ The obvious reply to this sort of account is that beliefs, and mental states generally, cannot be specified by behavior; a given mental state is consistent with all sorts of behaviors, depending on one's full set of beliefs and desires. As Peter Geach has remarked, the only sort of behavior that reliably specifies a belief is "putting it into words." But this itself presupposes an underlying mental act, "for on the face of it if somebody puts his belief into words, not parrotwise but with consideration, then there occurs a mental act" (1957, pp. 8-9).

Geach's point may seem too obvious to warrant discussion. So it is worthwhile to digress briefly to consider a prominent challenge to that seemingly obvious conceptual order, thoughts before words. In his recent book, *Making It Explicit*, Robert Brandom proposes giving priority to one's linguistic practices, so that a person's thoughts and statements have meaning only in light of the broader standards and assumptions of the community. In place of traditional accounts that determine the meaning of public utterances in terms of private mental events, Brandom proposes a "scorekeeping" model to articulate the public game of giving and asking for reasons. On this account, my words, thoughts, and beliefs are specified in terms of the "commitments" and "entitlements" that others attribute to me: what others view me as committed to saying or doing (in appropriate circumstances), and what others view me as entitled to say or do (in appropriate circumstances). What makes Brandom's proposal radical, and relevant here, is that he is offering more than an alternative *analysis* of the mind. Instead, he proposes to "discard" the concept of belief and "replace it with clearer talk about different sorts of commitment" (p. 196). Thinking, believing, and understanding become nothing more than interacting in the space of reasons:

Being rational – understanding, knowing how in the sense of being able to play the game of giving and asking for reasons – is mastering in practice the evolution of the score. Talking and thinking is keeping score in this sort of game (p. 183).

By inverting the usual explanatory order, Brandom avoids having to rely on mysterious, private mental events: "Understanding can be understood, not as the turning on of a Cartesian light, but as practical mastery of a certain kind of inferentially articulated *doing*" (p. 120).

Once the proper account of mental operations is made to rest on public practice, there is no room for any sort of privileged access to one's own mind. What one understands, or even believes, depends on what ascriptions others make regarding one, and Brandom applies the same analysis to being justified in one's beliefs (pp. 201-6), and to acting intentionally (pp. 243-45). Generally, "it is by reference to the attitudes of others . . . that the attitude of the one whose status is in question . . . is to be understood" (p. 162). As a concrete example of this principle, Brandom describes

the eighteenth-century British practice of tricking a man in a tavern into accepting “the queen’s shilling” – a legally binding commitment to join the military. Of course, we would want to say, the man may not have intended to join the military, and might not have believed himself so committed; he may have thought he was simply accepting the generous offer of a free pint. But Brandom is content with the unintuitive consequences of his theory. “Conceptual contents are *essentially expressively perspectival*; they can be specified explicitly only from some point of view” (p. 590). There is no special access to the ‘real’ meaning of one’s own thoughts or words. What matters is how one’s words and actions figure into the community’s norms. His slogan: “Semantics answers to pragmatics, attributions of content to explanations of use” (p. 188).¹⁹

Much of the force of this line of thought, in Wittgenstein, Ryle, Brandom, and others, comes from perfectly reasonable suspicions about introspection – suspicions that Aquinas can endorse. What Aquinas must resist, however, is the suggestion that the mind’s internal states and operations are not even an appropriate object of philosophic concern – no matter how one might propose to study them. Aquinas makes it clear, in Q87, how he would mount his resistance. The key argument comes at the start of 87.3c, where he contends that the intellect’s own acts are the first thing that it apprehends about itself.

As was said already [87.1], something is cognized insofar as it is actual. But the intellect’s ultimate perfection is its operation. For it is not an action tending toward another, which is the perfection of what is operated on (like building a building); rather, it remains in the thing operating, as its perfection and act. . . . Therefore the first thing about intellect that is cognized is its own cognizing (87.3c).

The Aristotelian jargon here should not be allowed to obscure the argument’s intuitive force. Its basic structure is straightforward:

1. Something is cognized insofar as it is actual.
2. The intellect’s ultimate perfection (and hence its actuality) is its own (internal) operation.
- ∴ 3. The intellect’s own cognizing (its operation) is what it primarily cognizes about itself.

I think there’s no question of the argument’s validity, but each of the premises might seem doubtful. Aquinas defends the first in 87.1c, offering as examples that “sight perceives not what is potentially colored, only what is actually colored” and that “insofar as the intellect cognizes material things, it cognizes only that which is actual.” One judges that a thing is a chameleon by seeing it actually change color (one cannot see potential color changes); one judges that a thing is a diamond by seeing it actually cut glass. In general, we observe and recognize what a thing actually is, not what it potentially is. Properly understood, this first premise should be granted by all parties to the debate. Indeed, the concern of the behaviorists precisely is to avoid resting their accounts on obscure, unverifiable

potentialities; their project is to appeal to *actions* rather than to hidden *powers*. If anything, the behaviorists might well criticize Aquinas for not taking this principle seriously enough, not focusing rigorously enough on actions, and not pushing far enough the governing Aristotelian maxim, that “the intellect cognizes itself just as it does other things” (87.1sc).

It is the second premise that should be controversial. The behaviorists and their offspring can be viewed as taking issue with this premise inasmuch as they focus on actuality at a different level: on the external behavior rather than the internal operation. Thus Brandom trades in “a Cartesian light” for “practical mastery.” This poses a challenge for Aquinas: why should the mind’s ultimate actuality be identified with internal operations rather than the external manifestations of those operations? What goes on inside is obviously a step toward speech and other forms of behavior, and so looks to be a kind of intermediary stage, just as “a disposition is in a certain sense halfway between pure potentiality and pure actuality” (87.2c). So just as mental acts are better known than dispositions, because they are more actual, it likewise seems that behavior is better known than mental acts, because it is more actual. In short, Aquinas’s own principles might well seem to push him in the direction of behaviorism.

Aquinas has a reply, and he makes it in the middle of the above passage. Drawing on a distinction proposed by Aristotle (*Met.* IX 8, 1050a23-b2), Aquinas contrasts two kinds of actions:

- “an action tending toward another, which is the perfection of what is operated on (like building a building)”;
- an action that “remains in the thing operating, as its perfection and act.”

Building is an instance of an activity that essentially involves an external product. Such actions are unintelligible apart from that product, because the action cannot be completed without the product being completed. Thought and perception are actions of a fundamentally different kind, because here there is no essential external product. A thought may lead to behavior, but it need not. The thought is complete of itself, and so it can be understood by itself. The same is true for other mental and sensory operations – for instance, “happiness does not pass into any external thing, since it is a good belonging to the one who is happy, and is his perfection” (*InMet* IX.8.1865). Aquinas in fact contends that *only* cognitive and appetitive actions are self-contained in this way (*SCG* II.23.993).

This old and perhaps moldy-looking distinction points to a serious problem for latter-day behaviorists. Even though external actions are the result of internal mental events, there is a gap between the two. Mental events are complete apart from any external behavior, and so focusing on the behavior is just a way of understanding a peripheral consequence of the original mental event. One studies the art of painting, or carpentry, or bookbinding by studying the products of these activities.

But the mind's operations are of a different kind, and must be approached differently.

This difference can be obscured if one focuses on dispositions rather than actions. Both Ryle and Brandom dwell on mental states such as understanding and believing that are not associated with any clear operation. The main difficulty with treating understanding as "the turning on of a Cartesian light" is that most of our understanding is dispositional, not the product of a sudden, explicit discovery. But of course we do sometimes make sudden discoveries, and such events seem like nothing so much as the turning on of a light. (Last week I realized, all of a sudden, that my wife's labor will involve not just her enduring the force of a baby's passing out her cervix, but also her producing the force to drive the baby out. This discovery *illuminated* my understanding of the process – there seems no better way to put it.)

By focusing on dispositional cases, where there is no act at hand, one can be made to feel that not much is being sacrificed in leaving mental events out of the picture entirely. Aquinas clarifies the debate by drawing a sharp distinction between dispositions and acts, and by insisting that "a disposition is necessarily cognized through its act" (87.2). Once we make this distinction, and focus on occurrent acts of thinking and perceiving, it is hard to take seriously behaviorism and its offspring. For it cannot be seriously doubted that we have occurrent sensations, and occurrent acts of thought, and that we know about these events in ourselves in a special, first-person way.

One might grant all of this and yet question just how relevant such internal information is. If we are doing phenomenology, then by all means let us meditate on our inner states. But if our concern is the real world, then (one might suggest) we should be focused on how thought and belief function in the real world, on "being able to play the game of giving and asking for reasons," to use Brandom's Sellarsian phrase. Aquinas would be sympathetic to this line of thought. The goal of practical knowledge, he argues in 84.8c, is to learn what things are used for: thus "a workman cannot make a complete judgment about a knife if he fails to grasp its use." But Aquinas distinguishes between practical knowledge and theoretical knowledge, and holds that the latter seeks to understand what things are, as opposed to how they are used (79.11; *InPA* I.41.136–45 [§362]; *InDA* I.1.56–62). In a study of human nature it is theoretical knowledge we should be after, and the goal of our inquiry should be the mind itself and its operations. It may be useful to reach a pragmatic account of our communicative practices, but this is no substitute for understanding the mind.

Still, even if one grants the attractiveness of the theoretical project, one might raise doubts about its feasibility. Once the introspective model is abandoned, it becomes harder to see what sort of insight into our own minds we can actually have. And to the extent that our own minds become

impenetrable, it becomes more plausible to move toward behaviorism. Aquinas's middle ground is lonely precisely because it is hard to give up introspection and still resist behaviorism, and hard to resist behaviorism without appealing to something like direct introspection.

Traditionally, reservations about the introspective model have been linked with doubts about the alleged infallibility of self-knowledge. As we have seen, Aquinas does not stress infallibility. Indeed, his halfway position entails that our access to our own minds is not just fallible but highly deficient. We know our own minds indirectly, by reflecting back from objects; as a result, we have very little to go on in understanding the mind. Unlike Locke's introspection, which is supposed to "furnish the Understanding with another set of *Ideas*" about the "actings of our own Minds" (*Essay* II.1.4), Aquinas's method is largely barren as a source of new ideas. One thinks of moldy cheese, then one thinks that one is thinking of moldy cheese. Such cognitive ascent yields a new set of higher-level theoretical concepts concerning the acts and capacities of the soul, but there is no new information acquired – no more than when one turns from the objects reflected in the mirror to the reflection itself (*QDV* 2.6c). The theory is attractive because it postulates no mysterious inner sense, but that attractiveness comes at the price of cutting off direct access to our mind and its operations.

Still, the price seems right inasmuch as our self-knowledge does seem to contribute very little to an understanding of how the mind works. In studying a painting, one might reasonably hope to learn something about the procedure of the artist. But in reflecting on our own acts of thought, we learn virtually nothing about how the mind works. Aquinas is well aware of the long history of failure on this topic: "many are unaware of the soul's nature; many have even erred regarding the soul's nature" (87.1c). He himself attempts to tease out some meager conclusions based on features of the objects of thought (*QQ*84–86), but these conclusions are often as dubious as they are insubstantial.

In an influential recent paper, Colin McGinn suggests that these sorts of consequences should be expected: specifically, he argues that human beings cannot, even in principle, explain how consciousness works. We cannot, he claims, even give a clear statement of what the problem is, because of "our inadequate conceptions of the nature of the brain and consciousness" (McGinn 1989, p. 349n). If we could articulate the problem clearly, then we might be able to solve it, but

it is something about the tracks of our thought that prevents us from achieving a science that relates consciousness to its physical basis: the enemy lies within the gates (p. 364; see also Nagel 1998).

It is hard to accept McGinn's bold thesis of in-principle impossibility, but not so hard to see the force of his more modest claim: that we find the mind difficult to understand because of "the way we have to form our concepts and develop our theories" (p. 350). Unlike McGinn, I suppose that we will

develop a perfectly good scientific account of consciousness, and that we will do so within my lifetime. But I expect that this theory will be disappointing, and hard to believe, because it will not have any resonance with our first-person knowledge of how our minds work. Naturally, we take such reflective evidence seriously, and we look for a theory of consciousness that will do justice to our experience of what thought and perception are like. It is a consequence of the middle ground Aquinas defends that the evidence of reflection is a very poor guide to the mind's inner nature: not just because it doesn't show us the mind's essence (§11.1), but because it is merely reflected knowledge, an indirect way of gleaning something about the mind through the character of the external objects we are suited by nature to understand.

11.4. Other minds

Aquinas's account of self-knowledge illuminates his attitude to the problem of other minds. Although his version of the problem is not our version, we can learn something from the difference. The problem of other minds takes several forms in Aquinas: there is a problem about our knowledge of other human minds, which is partially addressed in Q87, and a problem about our knowledge of alien minds – angels – which is addressed in Q88: "How the human soul cognizes things that are above it, immaterial substances." Naturally, the case of angels raises special problems, and so it is best to begin with human beings. (Strictly speaking, the case of God counts as a third form of the problem of other minds (see QQ14–15). But this case raises so many special problems that it is not usefully included here.)

In modern treatments, the problem of other minds is made to rise out of the gap between external behavior and internal conscious experiences. Aquinas formulates the problem in a different way; the gap he identifies lies between the material and the immaterial. The intellect is naturally orientated toward the external, physical world revealed by the senses, and as a result the intellect is handicapped in trying to understand the nonphysical.

Our intellect, in its state of life at present, has a natural orientation toward the natures of material things, and as a result it cognizes nothing except by turning toward phantasms. . . . So it is clear that immaterial substances, which do not fall under sense and imagination, cannot be intellectually cognized by us first and per se, by the means of cognition we [presently] experience (88.1c).

Aquinas does not deny that we can have some knowledge of immaterial things, indirectly, "through a comparison to sensible corporeal things, which we *do* have phantasms of" (84.7 ad 3). There is, however, no hope of directly grasping immaterial things, and this applies not just to our knowledge of God and the angels, but also to our knowledge of other human minds and our own. "Everything that the intellect apprehends in

this state of life, it apprehends through intelligible species abstracted from phantasms" (*QDV* 10.11c).

In essence, this way of formulating the problem is another version of the empirical constraint discussed in §10.2. Since knowledge comes through the senses, and the mind is immaterial, knowledge of the mind is inevitably problematic. This is too general to count as the problem of other minds, however, because it extends even to self-knowledge. We have seen how Aquinas stresses our inability to have direct knowledge of our own minds (§11.1), and we have seen how he solves the epistemological problem by appealing to reflection (§11.2). This strategy works only in the first-person case, because there is no way of reflecting on the thoughts of others. So the problem of other minds opens up because we have relatively good access to our own immaterial minds, but no clear access to other immaterial things.²⁰

Aquinas dramatizes the difference in discussing the way in which evil demons know the thoughts within our hearts (*QDM* 16.8). There are two ways in which a person's thoughts can be known:

- "by being seen in themselves, in the way that a human being recognizes his own thoughts";
- "through certain bodily signs."

In the first way, my thoughts can be seen only by God and myself. Demons, then, must use the second means (as must angels). But there is considerable evidence, Aquinas tells us, that demons are very, very good at drawing on such evidence. They of course pick up on the crude sorts of signs that we all notice: blanching as a sign of fear, blushing as a sign of embarrassment. They also pick up on the more subtle internal signs that doctors, for instance, are trained to notice, such as an elevated pulse. (These are all Aquinas's examples.) "But a demon can recognize such external and internal bodily signs much more than any human being can."

No matter how acute these demons are, we would not say that they have a solution in hand to the problem of other minds. If demons cannot actually see our occurrent thoughts, how can they know that their careful behavioral studies accurately map the thoughts of their subjects? Aquinas considers essentially this objection: that external behavior cannot furnish real knowledge of other minds, "because the same bodily sign is associated with many things: blushing, for instance, can result from the external passion of anger, and also from embarrassment" (obj. 14). He replies by stressing how very good demons are at noticing the fine points of behavior: "the same bodily sign can in general correspond with many effects, but in an individual case there are distinctive features that a demon can perceive better than a human being" (ad 14). So demons do know our thoughts, albeit not directly, because they are such keen students of human behavior.

This reply ignores the problem of other minds, in its modern form, inasmuch as it still leaves open the question of how demons ever possibly could

Demonology

Unlike us, demons and angels do not have the material world as the natural object of their intellects (§10.1). These separate substances apprehend the material world indirectly, through a kind of spiritual vision of immaterial things. Aquinas says that through this spiritual vision, demons can look into our minds. What they ‘see’ there are the various ideas, beliefs, memories, and dispositions that we keep stored in our minds between thoughts. Such knowledge will, of course, come in handy for a demon, who will know just where each one of us is most vulnerable to temptation.

Still, demons cannot know what we are actually thinking right at this moment. The reason, Aquinas explains, is that demons can neither ‘see’ nor predict the will’s choices. Since we choose what to think about, demons are unable to know directly our present thoughts. They must at this point rely on behavior.

This account is puzzling in one respect, interesting in another. It is puzzling, because in effect Aquinas is saying that although demons can see the various shafts and gears that make up our mind (our stored beliefs and attitudes), they cannot see which gear is at the moment engaged. But why not, given that they can see everything else?

The account is interesting because of what Aquinas says about the will. The reason demons cannot know the will’s choices is that “the inner will cannot be moved by anything outside it, except for God” (*QDM* 16.8c). It seems that Aquinas must implicitly be rejecting both causal and psychological determinism. For if the will’s choices were determined by our dispositional beliefs and values, then demons ought to be able to know – even predict – our choices. Their inability to do so suggests that the will is free from all restraints, causal and psychological, except for those introduced by God.

have become so good at seeing the connections between behavior and thoughts. (If they cannot see the thoughts, how can they have established the connections?!) But Aquinas has interesting reasons for not seeing a problem along these lines. This emerges more clearly in all-human cases. When 87.1c distinguishes the α and β levels of self-knowledge (§11.2), it is clear that α -level reasoning is limited strictly to the first person. This is reasoning “*in particular cases*, inasmuch as Socrates or Plato perceives *himself* to have an intellective soul.” If there is to be a solution to the problem of other minds, it must come at the β level, where we reason “*universally*, inasmuch as we consider the nature of the human mind on the basis of intellect’s act.” Here self-knowledge is not private; the β level

holds out the hope of universal knowledge that would apply to every member of the species.

But how will such universal knowledge ever get off the ground? Even here, at the β level, we begin with the mind's objects, and then its acts. But this is α -level information, in the sense that only I can know what I am thinking about. So it would seem that I can ascend to the β level only by starting with my own case and using the character of my own thoughts to derive more general descriptions of my own intellect. But this won't be full-fledged, β -level knowledge. Unless I can somehow know what other people are thinking about, a *universal* account can never get started.

If we were as savvy as demons, we might learn about others by observing them. Yet notice that demons have to be savvy, because they cannot count on human beings to give them an honest answer to their questions. Whereas demons have to work by stealth, philosophers of mind are under no such constraints: we can simply ask people what sorts of things they think about. Of course, this would be laughable as a solution to the modern problem of other minds. But from Aquinas's perspective it is enough, because his theory of mind makes no use of the sorts of qualitative conscious phenomena that cannot be captured in language or behavior. Aquinas works from the outside in. What matters in sensation is not the way it feels to see red, but rather the nature of sensible objects (§6.3). Likewise, his account of intellect is based not on subtle features of consciousness but on what sorts of things we can think about. The sort of data that Aquinas needs is that other minds can think about universals (§10.4), can reason from one premise to another (§10.5), and can know what they are thinking about (§11.2). Indeed, we shouldn't even need to ask people whether they can do these things: if they function as normal human beings, they must be able to do these things, and so must have minds of the sort that the Treatise describes. Of course, none of this answers hard questions like, *Does she experience pain the way I do? Is his sensation of yellow the same as mine?* But it is interesting to see that for Aquinas these are not questions that need to be answered in order to understand the mind. What matters is not what it's like inside other minds, but what sorts of thoughts other people can have. From our modern perspective, this ignores the crucial question. But it is worth considering why the question of *how it feels* now seems so crucial.

Aquinas's solution is not very helpful when it comes to the alien version of the problem of other minds, because angels (including the evil angels, demons) rarely reveal themselves to us. So Aquinas must be very cautious when he turns in Q88 to ask "How the human soul cognizes things that are above it, immaterial substances." He is so cautious, in fact, that he hesitates in identifying the immaterial substances with angels. They are "what we call angels," he says at the outset (88pr), but for the rest of the question he continues to refer to these entities as immaterial substances.

Aquinas comes to a surprisingly pessimistic conclusion in 88.2. If we presuppose that these so-called angels have the same character as the material things we are familiar with, then we can understand them in the usual way, through abstraction. But there is no good reason for that supposition. It may well be that these angels have nothing in common with our familiar material world. But from that supposition it follows that

Doctor Angelicus

Can the Angelic Doctor truly believe that we do not know the nature of immaterial substances? Such pessimism is surprising in light of QQ50–63, where he establishes the existence of angels and reaches many impressive-looking conclusions. In Q50 alone he argues

- a1. That angels are entirely incorporeal
- a2. That angels are not composed from matter and form
- a3. That there are a vast number of angels
- a4. That angels differ in species
- a5. That angels are imperishable

Later questions include:

- Q53. Angelic locomotion
- Q54. Angelic cognition
- Q59. Angelic volition
- Q60. Angelic love

How, given his empiricism and the pessimism he displays in Q88, does Aquinas come to know all these things? What one finds, on examining the *Treatise on Angels*, is that Aquinas thinks all of this information can be derived from a very small number of premises. In brief, he thinks general facts about creation can be used to show that there must be a class of immaterial (hence intelligent) creatures between us and God. On this slender reed, he bases all of the above and more.

None of this, however, tells us what the angels really are. There are a vast number of angels (50.3), and no two share the same species (50.4). So even if we somehow knew the nature of one angel, which we do not, this would not tell us about the nature of all the others. To know their natures, we would have to know the workings of their minds, and this is something we're not capable of grasping in this life – not even through divine revelation (*InDT* 6.3c). Only in the next life will the blessed be given a vision of the angels in all their glory (*InDT* 6.4 ad 3; 89.2c).

however much our intellect abstracts the quiddity of a material thing from matter, it will never reach anything like an immaterial substance. And so through material substances we cannot completely understand immaterial substances (88.2c).

In saying that we cannot “completely” understand immaterial substances, Aquinas means that we cannot understand their quiddities (ad 2) or natures (ad 3). All we can do is make some very general positive claims about what these angels are (like saying that they are in fact substances (ad 4)) and some more specific claims about what these angels are not. As he puts it elsewhere,

Everything we know that transcends the sensible is cognized by us through negation alone. Regarding separate substances, for example, we cognize only that they are *immaterial*, *incorporeal*, and other things of that sort (*InDA* III.11.188–92).

As for what these angels actually are, we cannot say very much.

Aquinas devotes considerable time, in a number of places, to criticizing earlier philosophers such as Avempace (d. 1138), who thought that we could reach some understanding of separated substances by doing abstract metaphysics or cosmology.²¹ To the extent that we can say something about the alien minds of angels, we do so by looking at our own minds and drawing comparisons. “We have to use our knowledge of the soul’s intellect as the basis for all of the things we grasp regarding separate substances” (*SCG* III.46.2235; see 88.1 ad 1). Aquinas is well aware of the gap here between what we can say about ourselves, based on our own self-knowledge, and what we can say about the so-called angels:

The human soul intellectually cognizes itself through its own cognizing, which is its own proper act, completely revealing its power and nature. But the power and nature of immaterial substances can be completely cognized neither through this nor through anything else that is found in material things, because none of these are commensurate to the powers of those substances (88.2 ad 3).

Reasoning from an analogy between our own minds and angelic minds brings limited success. This is our best way of understanding something of what it would be like to have a mind more powerful than our own and not subject to our empirical constraint. But these alien circumstances inevitably baffle us, and the incommensurability between our powers and theirs makes it difficult to draw analogies. “Even if we could, through the theoretical sciences, come to know the soul’s essence [*quid est*], it does not follow that through such sciences we could come to know the essence of separate substances. For our understanding . . . is a long way from the understanding of separate substances” (*SCG* III.46.2236). In this case there really is no satisfying solution to the problem of other minds.

Life after death

Aquinas believes that the human soul is immortal. His principal argument for this conclusion, in 75.6, rests on the soul's unique status as a form that is also a substance (§12.1). But to establish that the soul continues to exist apart from its body, he needs to show that the soul continues to function apart from its body. Q89 is devoted to explaining how the intellect continues to function in this way (§12.2). But the fact that a separated intellect can continue to function does not show that the soul survives death, and so Aquinas has to explain how such an intellect can still be considered a human soul (§12.3). He then faces the further problem of explaining how a separated soul can serve to sustain the existence of the human being. In fact, Aquinas believes that a separated soul is not a human being; the human being ceases to exist at death, and will come back into existence only with the resurrection of the body. Reflection on this doctrine sheds light on how, for Aquinas, material substances preserve their identity over time (§12.4).

12.1. Incorruptibilis

All human beings surely hope for life after death. What we hope for, quite simply, is that we ourselves will continue to exist, in some reasonably pleasant venue. Although the hope can be simply stated, it is a philosophically complex matter to determine what would have to be the case to ensure such *personal* survival. This chapter explores Aquinas's account of these issues.

As a Christian, Aquinas is of course committed to arriving at certain sorts of results. In this case, the Christian faith promises just what all human beings desire: personal immortality. A cynic might suggest that this consonance of hope and doctrine is no coincidence, that what religion provides, in the words of that great modern cynic, Sigmund Freud, is "illusions, fulfillments of the oldest, strongest, and most insistent wishes of mankind" (*Future of an Illusion*, p. 51). Aquinas likewise believes that the consonance of hope and doctrine is no coincidence. But he has a very different explanation in mind. In arguing that the human soul cannot perish (or be corrupted), Aquinas makes the following argument:

Everything that has an intellect naturally desires to exist forever. But a natural desire cannot be pointless. Therefore every intellectual substance is imperishable (75.6c).

We would not have an inherent, naturally occurring desire for immortality if it were unattainable. Aquinas claims not that this would be a cruel hoax on the part of nature, but that there would be no reason for us to have such a desire – it would be pointless – and that nature always does things for a reason. Whereas Freud supposes that our natural desires lure us into illusions, Aquinas takes those same desires as good evidence for the truth.

This argument depends on strong teleological assumptions that few would accept today. It seems clear, contrary to his central assumption, that there are things in nature that have no point (see §6.2). But Aquinas is aware that the argument is weak; in fact, he doesn't even describe it as an argument, but merely as a *signum*: an indication or sign, a piece of empirical evidence that helps make a persuasive case. This is in fact the last and least of three arguments advanced in 75.6 for the soul's immortality. His case for life after death rests much more heavily on the earlier two arguments, especially the first.

The first argument in 75.6 for the soul's immortality is much more elaborate and difficult to evaluate:

1. "There are two ways in which something is corrupted: either per se or per accidens."
2. "It is impossible for something subsistent to be generated or corrupted per accidens."
3. "Being corrupted per se is entirely impossible . . . for any subsistent thing that is wholly form."

Therefore,

4. "It is impossible for a subsistent form to be corrupted."

But

5. The human soul is a subsistent form.

Therefore, etc.

The argument is logically valid, but can its premises be defended? The first thing to note is that premise five appeals to some controversial earlier findings, that the soul is a form (75.1), that is "wholly form" (75.5), and that it is subsistent (75.2). Earlier, I argued that 75.2 is unpersuasive (§2.2). Still, for the sake of argument, let's grant that the human soul is a subsistent form. This leaves us with the first three premises to consider.

The first premise merely fixes terminology. When a thing is corrupted per accidens, it is corrupted "by something [else's] . . . being corrupted" (75.6c). A thing is corrupted per se, then, when it is somehow intrinsically corrupted – that is, not as a result of something else's being corrupted. Thus described, the two kinds of corruption are mutually exclusive and exhaustive, which is just what the argument needs. Their application might be illustrated by a forest fire. The individual plants in the forest are

Creation and annihilation

When Aquinas concludes that the human soul is incorruptible he means, roughly, that it cannot be destroyed, cannot go out of existence. But this isn't exactly what he means. 'Corruption' and its counterpart, 'generation,' are technical Aristotelian terms, referring to one kind of *natural* change, the kind that consists in going into or out of existence. Although Aquinas believes the soul cannot go out of existence in this way, he still allows that the soul might cease to exist due to supernatural causes, if it were *annihilated* by God (see 104.3). In this way, the soul can be destroyed.

Aquinas correspondingly believes that the human soul cannot be generated: "strictly, only the composite is generated" (*De principiis* 2.96–97 [347]). (The argument of 75.6 doesn't quite yield that conclusion, but it could easily be made to do so, by enlarging premises one and three along the lines of premise two.) As before, this does not lead Aquinas to the conclusion that the human soul cannot come into existence at all. (If this were the conclusion then he would have argued himself right out of his subject matter!) Aquinas believes that the human soul is *created* by God (§4.2). What is generated, strictly speaking, is the whole human being, the composite. In other substances composed of matter and form, the substantial form *is* generated per accidens. But the human soul does not come into existence in the way that other forms do, as a result of changes to the underlying matter (§4.1). The human soul is created ex nihilo. So it is unique, among forms, in not being generated at all.

destroyed per se, as are any animals caught in the fire. Among the things destroyed per accidens would be the forest as a whole, a wildlife habitat, fifty acres of prime timber, and beautiful camping grounds. In this case it is the substances that are corrupted per se, whereas things built up out of the substances are corrupted per accidens.

The second premise endorses the suggestion of this example, proposing as a general rule that substances can be generated or corrupted only per se. In fact, the premise speaks of things that are *subsistent*. Although being subsistent and being a substance are almost synonyms for Aquinas, his use of the former term makes it easier to keep in mind that this argument must apply not only to full-fledged substances like human beings and trees – something that "has the complete nature of some species" (75.2 ad 1) – but also to incomplete substances such as the human soul and the human hand (see §2.2). Because the human soul is subsistent (albeit in this weaker, incomplete sense), it cannot be corrupted per accidens.

This claim should look entirely insupportable, based on how I have characterized corruption per accidens. For it seems that substances, even complete substances, are routinely corrupted “by something [else’s] . . . being corrupted.” An owl might be destroyed as a result of its habitat’s being destroyed. This looks like a case of corruption per accidens. To set things aright we need to sharpen Aquinas’s original distinction. Corruption per accidens occurs not just any time x ’s being corrupted causes y ’s being corrupted. The relationship between x and y must be tighter than a causal one: what seems needed is that x ’s being corrupted just is y ’s being corrupted, or that x ’s being corrupted (partly) constitutes y ’s being corrupted. In this sense we might say that a priceless fresco is destroyed per accidens when an earthquake destroys a church wall. It is not the case that the wall’s corruption *causes* the fresco’s corruption – say, by falling onto the fresco and destroying it. Rather, the wall’s destruction just is the fresco’s destruction, inasmuch as the fresco is a part of the wall, an accidental form. Much the same occurs with substantial forms. The owl’s soul is destroyed when the owl is destroyed: destroying the owl doesn’t *cause* the soul’s destruction, it *includes* the soul’s destruction. Aquinas is talking about cases like these when he writes, “things that do not subsist, like accidents and material [substantial] forms, are said to be made and corrupted through [*per*] the generation and corruption of their composites” (75.6c). Here the preposition *per* needs to be read not causally, but (as we might put it) constitutively.

Subsistent things cannot be corrupted per accidens. To be subsistent just is to exist per se, and how a thing exists determines how it can be generated or corrupted.

For a thing is generated or corrupted in the same way that it exists – existence being what a thing acquires through generation and loses through corruption. Hence that which has existence per se can be generated or corrupted only per se (75.6c).

Substances like trees and owls are metaphysically independent, free-standing entities. Other forces can drive them out of existence, but they are not dependent entities in the way that shape is dependent on surface (§§2.2 and 2.4). Because substances exist independently, that existence cannot be given or taken away in virtue of something else’s being given or deprived of existence. Nothing generated or corrupted in that way – per accidens – could count as a substance. These remarks hold even for incomplete substances like the human soul or the human hand. A person’s hand goes out of existence when the person goes out of existence, or when the hand is severed from the person (§3.3). But here the relationship is, in a broad sense, causal: one event (the hand’s being severed) causes another event (the hand’s going out of existence). The hand, as a (weakly) independent substance, is corrupted per se.

So the human soul does not cease to exist simply in virtue of the body’s being destroyed. Unlike the soul of an owl, the human soul is a (weakly) independent substance. The corruption of the owl’s soul just is the cor-

ruption of the owl's body, under a different description. (I'm presupposing the materialist account of the sensory soul proposed in §2.3, and the reductive hylomorphism proposed in the *Excursus* to Part I.) But the corruption of the human body is not the corruption of the human soul. The former may cause the latter, for all we have seen, but it is not constitutive of the latter. Thus "the souls of brute animals perish when their bodies perish, whereas the human soul cannot perish, unless it perishes per se" (75.6c).

All the substances we are familiar with do perish per se. But Aquinas believes it is a consequence of the human soul's peculiar status as a *subsistent form* that it cannot perish in this way, either. According to premise three, no subsistent form can be corrupted per se. This is the heart of the argument. If one accepts that the human soul is subsistent, then there is a straightforward path, through premise two, to the conclusion that the human soul cannot be corrupted per accidens. That preliminary conclusion should not be controversial. The crucial issue is whether the human soul might somehow be corrupted per se. Aquinas argues for the negative as follows:

It is clear that what holds of something in its own right is inseparable from it. Existence, however, holds per se of form, which is actuality. As a result, matter acquires actual existence in virtue of its acquiring form, whereas it is corrupted in virtue of the form's being separated from it. But it is impossible for a form to be separated from itself (75.6c).

This argument makes it clear that premise three rests not on the human soul's subsistence, but on its status as a substantial form. As a substantial form, the human soul brings existence to the human composite. Existence is "inseparable" from the soul, and from all substantial forms, because such forms, by definition, are what "give existence unconditionally" (76.4c).¹ Matter goes out of existence when separated from form, but how can form go out of existence? In ordinary cases (of so-called "material forms"), the substantial form metaphysically depends on informing some kind of matter, and so the matter's being separated from the form entails the destruction of both the form and the matter. But this is corruption per accidens, analogous to the fresco's being destroyed in virtue of the wall's being destroyed. How could a form that is not dependent on its matter be destroyed at all? The only possibility that seems left is the absurd one, rejected out of hand, that the form might "be separated from itself."²

This argument contains a serious mistake or perhaps omission. There are many ways in which a substance can be corrupted per se: owls can die in forest fires, hands can be severed, and so on, endlessly. Aquinas argues that a metaphysically independent, free-standing form cannot be destroyed, yet he fails to rule out every way in which destruction might occur. In arguing, he describes existence as "inseparable" from form, but this hardly shows that a subsistent form cannot cease to exist. A soul can be

annihilated by God, after all (see **Creation and annihilation**, p. 363), and for all we know there are other ways in which the human soul might be driven out of existence. Admittedly, not all such possibilities count as corruption: “nothing is corrupted except through its form being separated from matter” (50.5c). But even when we limit our attention accordingly, Aquinas still has not blocked all of the possibilities. By establishing that the human soul is subsistent, he has shown that it is not destroyed simply in virtue of its body’s being destroyed. This follows from the fact that the human soul is not metaphysically dependent on the body, in the way that a shape depends on a surface. Yet the human soul might be dependent on the body in some other way, analogous to how a human being depends on air and water, or an owl depends on a forest. In fact, the human soul does depend on the body for its ability to function: “intellect’s actually cognizing – not just taking in knowledge anew, but also using knowledge already acquired – requires an act of imagination and of the other [sensory] powers” (84.7c; §9.4). But Aquinas regularly insists that the soul must be able to function on its own, in order to exist on its own: “if no operation will belong to it without the body, then it is impossible for the soul to be separated” (*QDA* 15 sc 1). So it looks as if the human soul might well be destroyed, indirectly, by the body’s being destroyed. In this way, the soul would be corrupted at death.³

Perhaps we should say not that Aquinas’s argument is mistaken, but simply that it omits a crucial point. For he himself makes precisely the above argument, in the third objection to 75.6:

Nothing exists without its proper operation. But the soul’s proper operation, which is to cognize intellectually with a phantasm, cannot take place without the body. For, as is said in the *De anima*, “the soul intellectually cognizes nothing without a phantasm” [431a16–17], and there is no phantasm without the body [403a8–10]. Therefore the soul cannot remain once the body is destroyed.

In replying to this argument, Aquinas grants the opening premise, and grants that in this life the soul does need the body in order to function. But then he makes a move that appears lamely ad hoc: he announces that all this will change after death: “once separated from its body, the soul will have a different mode of cognition, like that of other substances that are separate from body” (75.6 ad 3). After death, in other words, we will cognize like the angels, and so our bodies will be unnecessary. Rather than defend that claim here, he postpones discussion until Q89. So it seems that we cannot decide on the soul’s immortality – or at least cannot decide on Aquinas’s principal argument in 75.6 – until we reach the Treatise’s final question, where we confront the mode of cognition of a separated soul.

12.2. Can a separated soul continue to function?

The Treatise’s final question considers how the human intellect functions apart from its body. In this separated state, the intellect no longer needs

to turn toward phantasms, but receives a kind of divine illumination: “its cognition comes through species in participation from the divine light’s influence” (89.1 ad 3). In successive articles, we learn that separated souls

- have a complete cognition of other separated souls, and an incomplete cognition of the angels (a2);
- have a general and confused cognition of everything in nature, including some singulars (aa3–4);
- retain knowledge from this life, dispositional and actual (aa5–6);
- cognize without being impeded by spatial distance, yet seem unable by natural means to know what goes on here (aa7–8).

Despite or even because of these conclusions, it is easy to lose enthusiasm for Aquinas’s project at this point. One may doubt whether separated souls exist at all; one may doubt whether Aquinas can say anything of value about what conditions will be like in this separated state. The conclusion of the preceding section complicates these doubts by entangling them. For it now seems that Aquinas can not establish that the human soul survives death until he first establishes how it functions apart from the body. In a sense, this adds interest to the project of Q89, because we can now view the entire question as proving a lemma needed for 75.6, where Aquinas officially argued for the soul’s immortality. But unless Q89 can actually prove that the separated soul will continue to function, the whole plan seems to collapse. If this last question of the Treatise cannot bear such weight, then the soul’s immortality must remain a matter of faith.⁴

In the end, I will suggest that Q89 does bear a good deal of weight. But, *prima facie*, the prospects do not look good. In each of the eight articles of Q89, Aquinas describes ways in which a separated soul *could* continue to function, but he doesn’t even try to prove that the separated soul *will* continue to function in this way. In this respect these articles have quite a different feel from the rest of the Treatise. The body of earlier articles was almost always the occasion for complex arguments purporting to demonstrate the thesis in question. Here Aquinas is most likely to begin, in the *sed contra*, by quoting a Biblical passage that supports his own thesis (aa2, 4, 6–8; a5 appeals to St. Jerome). Then, instead of proving these appeals to authority, the body of the article offers an account of how the separated soul *could* do the things we are told it *does* do. A typical case is his discussion of whether spatial distance impedes the separated soul’s cognition (a7). After ruling out one wrong account, Aquinas solves the question as follows:

A separated soul intellectually cognizes singulars through the influence of species from the divine light. This light is related equally to near and far. So spatial distance in no way impedes the separated soul’s cognition.

This settles the matter, in that it explains how Aquinas supposes the separated soul transcends spatial limits. If Aquinas had earlier offered a proof

of the first sentence, we could be satisfied. But he never does even try to prove that separated souls will receive any sort of illumination. So the entire article seems nothing more than an extended just-so story. If it happens, it happens like that.

Aquinas begins to give a role to divine illumination in 89.1, so it is here we would naturally expect to see some sort of argument. Although the *sed contra* does offer an argument, it's one that, in light of §12.1, seems disastrously inept:

The Philosopher says in *De anima* I [403a10–16] that if none of the soul's operations is proper to it, it cannot be separated. But it can be separated. Therefore it has some proper operation – above all, intellective cognition. Therefore it engages in intellective cognition while without its body.

Aquinas here confirms that the soul's separate existence requires its having its own operation, independent of the body. I refer to this all-important claim as the *OE conditional*. Symbolically, the OE conditional holds that $\neg O \rightarrow \neg E$. (If the soul cannot operate on its own, then it cannot exist separately.) Aquinas makes the valid logical maneuver of *modus tollens*: he asserts *E* (“it can be separated”) and uses the entailment to derive *O*. Q.E.D.

The difficulty is that Aquinas is not entitled to *E* until he establishes *O* on independent grounds. In 75.6 obj. 3, Aquinas recognizes that the OE conditional grounds a legitimate objection to his claim that the soul can survive without the body (see §12.1). Instead of dealing with the issue there, he deferred discussion until Q89, where he promised to clarify the claim that after death, “the soul will have a different mode of cognition” (75.6 ad 3). Although Q89 does clarify the nature of this different mode of cognition, it offers no proof that such a transformation will occur. So Aquinas seems to have illicitly pulled himself up by his own bootstraps: proving *E* on the supposition that *O*, then proving *O* on the basis of *E*.

Is any more favorable verdict available? We might, first, reconsider whether perhaps Aquinas does manage to prove *E* without presupposing *O*; that is, perhaps 75.6 succeeds in proving the soul's incorruptibility without establishing that the separated soul continues to function. We already have reason to doubt this, given the finding of §12.1 that the first and most promising argument of 75.6 is at best incomplete. Putting that to one side, there is a further reason to be highly suspicious of Aquinas's claim to have demonstrated *E*. For if he has demonstrated *E*, then, given the OE conditional plus *modus tollens*, he has also demonstrated *O*. Of course this is precisely what Aquinas claims, in 89.1sc. But it seems altogether too easy. To have demonstrated *O* is tantamount to have demonstrated that God chooses to illuminate separated souls so that they continue to function. But is there anything in 75.6 that could possibly yield a result of that sort? It certainly does not look that way. No wonder, then, that none of the arguments there succeed. Such narrowly based arguments

12.2. CAN A SEPARATED SOUL CONTINUE TO FUNCTION?

couldn't possibly succeed, given the far-reaching implications of the soul's incorruptibility.

One might try redeeming Aquinas in a different way, by questioning the status of the OE conditional. The claim, one might suggest, does not rest on a conceptual necessity, but on something somehow weaker.⁵ I have already quoted several passages that seem to preclude any such weakening of the conditional:

If no operation will belong to it without the body, then it is *impossible* for the soul to be separated" (*QDA* 15 sc 1);

[I]f none of the soul's operations is proper to it, then it *cannot* be separated (89.1sc);

Nothing exists without its proper operation (75.6 obj. 3).

There are many others. For example:

It is *impossible* for a substance to exist that has no operation (*SCG* II.8o.1618).

[N]o substance is deprived of its proper operation . . . (*QQ* 3.9.1c).

As the Philosopher says in *De anima* I,⁶ if none of the soul's operations is proper to it, in such a way that it can have it without the body, then it is *impossible* for that soul to be separated from the body (*QDV* 19.1c).

These passages seem to insist on the OE conditional as a matter of conceptual necessity; hence it seems that a proof of the soul's incorruptibility needs to show that the soul would continue to function. But when Aquinas comes to explain why the OE conditional is true, he sometimes seems to have nothing more in mind than the teleological assumption that "nothing is idle or pointless in nature" (88.1 obj. 4):

If the soul can be separated from the body, then it must have some operation without the body, given that *no substance is idle* (*QDA* 14 obj. 14).

The Philosopher says in *De caelo* II [286a8] that every thing is for the sake of its operation; hence if a thing remains, its operation remains. This is also what Damascene says, that no substance is idle (IV *SENT* 5o.1.1 sc 1).

[I]f none of the soul's operations is proper to it . . . then it is impossible for that soul to be separated from the body. For the operation of any thing serves as its end, being what is best in it (*QDV* 19.1c).

If the OE conditional holds as a matter of teleological necessity, then we have the logical space that Aquinas seems to need. This sort of teleological necessity is qualified: it holds not that nature will always do what is best, but that nature will bring about the best *possible* result. So if it is possible for a separated soul to continue operating, it will continue operating, because nothing in nature is idle. But if it turned out that a separated soul could not possibly continue to operate, then this would not show that such a soul could not exist, only that nature was hampered in what it might achieve.

According to this line of thought, there would be no need in 75.6 to resolve the question of *O* (the separated soul's continued operation), because *O* would no longer follow (as a necessary, conceptual truth) from *E* (the soul's continued existence apart from the body). Aquinas could prove the soul's incorruptibility without immediately resolving whether the separated soul continues to operate. Of course, given his teleological views, there would still be something worrisome about a separated soul that did not continue to function. (This would be the force of introducing the OE conditional at 75.6 obj. 3.) But the embarrassment would be resolved simply by establishing that there are ways in which the separated soul *could* continue to function. We could feel confident that the separated soul does so function by appealing to the teleological principle that nature wouldn't consign a substance to idle existence. These considerations would explain why Aquinas waits until Q89 to work out the separated soul's mode of operation, and why he is content there to establish merely that the separated soul *could* function in these ways.

Although this interpretation is attractive in some ways, it must be rejected. Aquinas has good reasons to treat the OE conditional as something more than a consequence of teleology. The link between existence and operation holds on conceptual grounds, as a consequence of the way Aquinas understands what it is to exist. This is the point of the Aristotelian slogan "for living things, living *is* existing" (*De an.* II 4, 415b13). It would be nonsense, on Aquinas's way of thinking, to separate a thing's existing from its being alive. To live just is to exist in a certain way – which means, to *function* in a certain way. "Living refers not only to the existence of the living thing, but also to the operation of life" (*InDC* 2.4.334). A soul – "the first principle of life" (75.1c) – can continue to exist only if it continues to live. But nothing is alive that does not carry out one or more of the operations associated with life (rational, sensory, nutritive). In the case of a separated soul, only the rational capacities remain (77.8). If these too cannot be exercised, then the separated soul does not exist. To suppose otherwise – to imagine that a separated soul might (at least conceivably) have a functionless, idle existence – is to think of existence as some sort of transparent property that entities have in addition to all of their other attributes and capacities (see §5.2). But this is much too mysterious: for a thing to exist just is for it to act in one way or another. The soul's ceasing to function would be its going out of existence.

But would a separated soul actually have to be in action? Shouldn't it be enough that the separated soul preserve the capacity for rational thought? And isn't this capacity preserved, regardless of whether phantasms are present? Aquinas holds that the intellect requires phantasms not as the organ or instrument of thought, but as an object of thought (*SCG* II.81.1625; *QDIA* ad 11). This suggests that the faculty of intellect can remain intact without phantasms, even if the raw materials are missing.

And these remarks in turn suggest that the OE conditional does not hold as a conceptual necessity: that the soul might (at least conceivably) have the mere capacity for thought, and might lack the necessary objects. (Think of a steel factory with its iron supply cut off.) Again the OE conditional might seem to hold only as a consequence of Aquinas's teleology: nature would not have any reason to allow idle substances, existent but incapable of actually functioning. (Corporate executives wouldn't stand for an idle factory.)

Aquinas of course allows that the soul's various capacities are not always functioning: "One finds that what has a soul is not always in actuality as regards the operations associated with life" (77.1c). But he expressly contends that a living thing must always have some operation that it actually engages in. He finds incoherent the notion of a completely dormant living substance. To be completely dormant is to be dead. This emerges when he argues that the separate substances – angels and demons – must always be engaged in thought:

Every living substance has some actual operation of life which by its nature is always present to it, even if other operations are sometimes present to it potentially. Thus animals always engage in nutritive operations, although they do not always engage in sensation. But separated substances are living substances . . . and they have no operation of life other than thinking [*intelligere*]. Therefore, by their nature, they must always be actually thinking (*SCG* II.97.1823).

In this life, human beings remain continually alive in virtue of our ongoing nutritive operations (not just eating and digesting, but all of the ongoing activities of heart, lungs, etc.). But a separated soul will have access at most to the activities of the rational part. If these are unavailable, the separated soul could not be said to have life, and therefore could not exist.

This last line of thought entails not just that separated souls must actually think, but that they must *always* be actually thinking, just as angels are. Descartes held that this was so even for souls in this life. I have not found Aquinas explicitly saying as much, even in the case of separated souls,⁷ but it should not be surprising that he is committed to this claim. The principal thesis of Q89, after all, is that a soul separated from its body will take up the mode of cognition that the angels employ: "A separated soul uses intellect just like the angels do, through species that it receives from the influence of the divine light" (89.3c). The *Summa contra gentiles* is even more insistent:

It will intellectually cognize on its own, in the manner of substances that are entirely separate in being from bodies. This will be treated below. . . . Once it is entirely separated from the body, it will be *perfectly* assimilated to separate substances as regards its manner of intellectual cognition (II.81.1625).

In pointing to the treatment below, Aquinas is referring to II.96–101. And one of the most prominent conclusions there about the manner in which

the so-called separate substances think is that they are always actually thinking.

We have good reason, then, to treat the OE conditional as a conceptual truth, obtaining in virtue of what it means for a living thing to exist. The implications for the soul's immortality can be summarized as follows. First, the soul's existing apart from the body entails its functioning apart from the body. (This just is the OE conditional, inverted.) Second, if Aquinas really could demonstrate that the soul is incorruptible (in 75.6), he could conclude straightaway that the separated soul can engage in intellective cognition (in 89.1). Third, since the arguments of 75.6 seem incapable of yielding the conclusion reached in 89.1, it seems that those earlier arguments cannot be demonstrative. Fourth, even if the arguments of 75.6 are partly effective, they need to be supplemented by evidence that the separated soul will continue to function. If such evidence is not forthcoming, the soul's incorruptibility cannot be established.

I have already indicated that Q89 does not, on its face, seem to make much of a case for the soul's continued capacity to function. Aquinas appeals to the Bible, to Jerome, to 75.6; he sets out a way in which the soul could continue to function, if in fact "it can be separated and have another mode of intellective cognition" (89.1c). But all of this appears quite ad hoc: philosophical demonstration buttressed by theological bedtime stories. (Or by a tale worthy of Ovid's *Metamorphoses*, as Pomponazzi (1462–1525) would say in criticizing Aquinas (*De immortalitate animae* ch. 9).)

Things are not so bad. Although Aquinas does not *demonstrate* in Q89 that the separated soul will continue to function, he makes a persuasive case that it will. The key argument comes in 89.1c, which in broad outline runs as follows:

1. "A thing's mode of operation follows its mode of existence." (In other words, *how* a thing operates depends on *how* it exists.)
2. "But the soul has a different mode of existence when united to its body and when it has been separated from its body."

Therefore,

3. "The soul can be separated and have another mode of intellective cognition."

This may seem obscure. Existence appears to be the sort of thing that cannot come in degrees or kinds. Either a thing exists or it does not; there are not *ways* of existing. But, as noted earlier, Aquinas has a more robust conception of existence. A thing does not exist *simpliciter*, but exists as such and such a thing. So to have a different mode of existence is, in effect, to undergo a change in what a thing is. Now we do not want a case where the change is such as to produce an entirely new substance: we do not want a substantial change. As examples we might instead think of tadpoles changing into frogs, caterpillars into butterflies, or late-term fetuses into infants. Such changes naturally will lead to changes in how a thing operates. The

human soul, at death, undergoes a change that is every bit as dramatic. When Aquinas holds that the human soul has a different mode of existence after death (the second premise), he doesn't mean anything very mysterious. All he means is that the soul was united to a body, and that now it is separated from that body. Isn't it reasonable to suppose, he asks, that a change so utter and dramatic will produce differences in the way the soul operates?

This is not a demonstrative proof, and I can't see how to turn it into one, but I believe that nevertheless it is an argument with some force.⁸ It raises, however, a considerable number of problems; in this and the following section I want to address some of them. The first thing we should note is that Aquinas *is* entitled to assume (from 75.6) that the human soul will undergo the dramatic change of separation. We cannot assume that the soul will be able to *endure* as a separate substance, just as we cannot assume that a newborn will survive birth. (To endure, it must be able to function.) But if the soul is a subsistent form, then the separation will not immediately destroy it, in the way the crumbling wall immediately destroys the fresco. Instead, the soul would at most die indirectly, due to lack of phantasms, in the way a newborn might die from lack of oxygen.

Newborns make an astonishing transition from umbilical cord to lungs. Aquinas believes that the separated soul will make a similar transition from phantasms to divine inspiration. Of course, we believe this is so for newborns because we can see it happen. Aquinas's claim about the soul is, for us here and now, an unverifiable hypothesis. But he thinks there is evidence in favor of this hypothesis, in that we can see how the body in some contexts impedes the mind from its full operation. Q89 just hints at this line of thought: "A separated soul is in a way more free to use intellect, insofar as the weight and distraction of its body keeps it from the pure operation of intellect" (89.2 ad 1). Elsewhere Aquinas takes such claims much farther. According to the *Quaestiones de anima*,

There is no doubt that bodily motions and the preoccupation of the senses impede the soul from receiving the influences of separate substances. Thus those who are asleep and detached from their senses receive revelations that do not come to those using their senses (15c).

The *Summa contra gentiles* (II.81.1625) offers a series of signs suggesting that "the soul, when it is kept from being preoccupied by its own body, is rendered more capable of understanding certain higher things." The virtue of temperance, he says, in distancing the soul from bodily pleasures, "makes human beings more able to achieve understanding." While asleep, people "perceive the future due to an impression from higher beings" (see also 86.4 ad 2). This is even more true for "those in a trance and in a state of ecstasy – the more distance there is from the bodily senses."

Although not all of these examples will seem equally compelling, the underlying point is plausible. Consider the analogous case of how the blind

and the deaf develop special capacities to compensate for their handicaps. The loss of sight or hearing is, in Aquinas's terms, a change to one's mode of existence, and the mind adapts accordingly. How much more might the mind adapt, then, if it were entirely separated from the body? It is important to see that this is not a hypothesis that we can actually test. One can lock oneself in a dark and quiet room, and stay there for hours, but that still leaves the inevitable bodily pangs and cravings. One can pursue a trance-like state, but that still leaves the faculties of imagination and memory. It is difficult to conceive of the stillness a separated soul would experience. The prospect, in fact, seems rather terrifying. But this too plays into Aquinas's argument, because his point is that a separated soul would be attuned, like no soul on earth could be, to receive the impressions of a higher substance.

Of course, all this goes nowhere if there are no impressions to receive. Aquinas is very far from supposing that a separated soul could simply meditate on its own ideas. Phantasms have to be replaced by some other source of information, and this is where divine illumination comes into play. The crucial third objection of 89.1 begins with the assertion, "If the separated soul intellectually cognizes, it must do so through some species." The objection goes on to rule out various possibilities: not innate species; not species acquired through abstraction; not species preserved from life on earth; not divine illumination. Aquinas grants all but the last, and insists,

The soul comes to participate in these [divinely impressed] species just as other separate substances do, though in a lesser way. So as soon as it stops turning toward the body, it is turned toward higher things (89.1 ad 3).

But why should we have any confidence that any such divine inspiration is forthcoming? This, on its face, is the most serious objection to Aquinas's account. He seems to introduce illumination at this point as an entirely ad hoc remedy, a kind of theological life support for souls that would otherwise come to an entirely natural end.

Again, things are not so bad. Despite appearances, Aquinas's account is not at all ad hoc; in furnishing the soul with divine illumination, he is not making any special provision for human beings, but simply incorporating separated souls into his broader account of how separate spiritual substances function. Thus,

the souls of the dead, according to both divine ordination and mode of existence, are segregated from the company [*conversation*] of the living, and joined to the company of spiritual substances, which are separate from body (89.8c).

But Q89 is again not very helpful in spelling out the implications of this claim. For starters, despite his talk of "the divine light's influence" (89.1 ad 3), Aquinas does not think that separated souls are directly illuminated by God. Instead, "all divine illuminations are conveyed to humans by the

mediation of angels" (117.2sc).⁹ Such illumination is divine inasmuch as God is the ultimate origin of impressions that make their way through the heavenly hosts and eventually to the lowest of separate intellectual substances, separated souls. (*QDV* 9.2 contends that only the loftiest of angels are illuminated directly by God.) In our current condition, we are blind to pure ideas: "the human intellect cannot take in the raw intelligible truth, . . . and so angels propose it to human beings under the likenesses of sensible things" (111.1c). In the next life, the soul will be attuned to the world of pure thought: "once it becomes separated from its body, it understands by turning not toward phantasms but toward things that are intelligible in their own right" (89.2c).

Q89 suggests that God will directly intervene to illuminate separated souls, and this damages the credibility of Aquinas's proposal.¹⁰ Why should we believe that this kind of special intervention actually occurs? It is this that gives the account its ad hoc appearance. Now it may not seem that Aquinas gains anything by appealing to the angels – indeed, this may seem even more damaging to his credibility. In fact, however, the account becomes considerably more attractive once we see that it incorporates separated souls into a broader world view. Aquinas is already committed to a realm of pure thought, where angels speak to one another and spread God's illumination. The perfection of the universe requires the angelic orders, just as it requires the Earth's astonishing biodiversity (see Epilogue). In thinking about how separated souls might function, Aquinas comes to the reasonable conclusion that they would function much as other spiritual substances function.

Aquinas offers detailed accounts of just how the angels interact with one another. Rather than interact physically, they speak to one another through what is, essentially, mental telepathy. Some angels are more intelligent than others – in fact, no two angels are equal in mental ability, which is why no two angels belong to the same species (50.4, *SCG* II.93) – and so Aquinas describes a world in which God illuminates the highest angels, and the higher angels illuminate the lower angels. This illumination consists in information about God and God's work. Since the possession of such knowledge is the ultimate end of all rational beings (see, e.g., *SCG* III.25), it is a fundamentally good thing to pass on illumination. Aquinas concludes, on this basis, that the angels are morally obligated to illuminate lower angels regarding everything that they know (106.4).¹¹ The lower angels, in turn, have the responsibility to illuminate human beings. As long as our souls are embodied, these angels have the tedious task of teaching us through sensible images, either by influencing our imagination (111.3) or by manipulating our senses – by making us perceive things that aren't there, or by putting actual things in front of us, as when angels take human form (111.4). Once the soul is separated from its bodily concerns, the angels can speak to us in their own far more civilized manner:

Angel talk

“To talk [*loqui*] to another,” Aquinas holds, “is nothing else than to show to another a concept from one’s mind” (107.1c). This might serve better as a definition of *communication*, but of course Aquinas does not mean that angels literally talk; he means that they communicate. Although Aquinas discusses angel talk in detail twice (Q107; QDV 9), I cannot follow how he thinks it happens. He says that angels talk to other angels by forming a thought and then “ordering it toward another.” What this actually means, he doesn’t say; presumably, he doesn’t know.

Part of the problem is that we cannot now talk to others in this purely mental way, nor have we ever heard anyone talking to us in that way. Aquinas stresses that in this life we cannot communicate like the angels: “the human mind is obscured from other humans because of the body’s coarseness” (107.1 ad 1). As a result, we have to use perceptible signs to communicate. But he thinks that our minds, even now, are *capable* of talking mentally with the angels, as well as with other human minds. After describing how angels talk, he remarks that “the same would be true for us, if our intellect could be drawn immediately to intelligible things” (QDV 9.4c). This is precisely what he thinks will occur, once the mind is separated from the body.

Perhaps we can talk to the angels, even now. They might even be listening, although they won’t learn anything from us. Perhaps they are talking to us, and we aren’t hearing them. It’s up to them whether they want to talk (see QDV 19.1c, at end). Although Aquinas thinks they surely will want to, in the next life, we can imagine that they don’t see much point in trying to communicate mentally with creatures so preoccupied with their bodies.

Once the soul becomes separated from the body, its attention will not be directed toward lower things, so as to acquire [information] through them, but will be unrestrained, capable of receiving an impression from higher substances without looking for phantasms that won’t in any way be there (QDA 17c).

From this perspective it should now seem perfectly sensible and obvious that a separated soul would not wither away for lack of stimulation. Would we not instead become like the angels? And would the angels not hasten to make themselves known to us, and share with us the glory of God?

Of course, this line of thinking rests on an ontology that now seems rather eccentric. But we need not believe in angels, or even in God, to be impressed by the way that Aquinas’s account of separated souls fits beau-

tifully into his larger view of God and creatures. Aquinas does not succeed in proving the soul's immortality, but he embeds it so deeply within his theological worldview that it must have struck him as a result no less certain than any other strand in his tightly woven web of beliefs.

12.3. A foreign state

Aquinas ascribes to separated souls an existence so different from our earthly existence that it is hard to believe we are still talking about human nature – or hard to believe we are still talking about *Aquinas* on human nature. In this section I consider a series of problems for Aquinas's account that spring from this observation.

A first difficulty stems from the apparently Platonic nature of the account. In describing the way our minds are preoccupied with our bodies, prevented from enjoying the illumination of the angels, Aquinas seems to approach the Platonic conception of the body as an impediment to knowledge, as something we are “bound to” (89.1c) and would be better off without. Compare this remark of Aquinas's:

The intellect needs the help of the senses in its state of imperfect cognition, inas-much as it receives [information] from phantasms, but not in the more perfect mode of cognition that suits the separated soul. It is like the way we need milk when we are young but not when grown up (*QDA* 19 ad 19).

with this one from the *Phaedo*:

And, indeed, the soul reasons best when none of these senses troubles it, neither hearing nor sight, nor pain nor pleasure, but when it is most by itself, taking leave of the body and as far as possible having no contact or association with it in its search for reality (65c).

Has Aquinas, despite his thoroughgoing Aristotelianism, succumbed in the end to the allure of Platonism?

Despite the incautious remark from *QDA*, Aquinas strives throughout Q89 to defuse the potentially Platonic elements in his account. After describing the way a separated soul will take on a new mode of operation, Aquinas adds that “there is a further puzzle here” (89.1c). The puzzle is why nature, which “always aims at what is better,” would have attached the human mind to a body if it were better off without one. This is of course the objection that many an undergraduate will quickly make upon reading the *Phaedo*, and Aquinas regards it as entirely decisive. He resolves his puzzle by explaining how, despite appearances, it is in fact better for the human soul to be united to a body. In detail, Aquinas explains that although the angelic mode of cognition is *in principle* better than turning toward phantasms, it is not better *for us*. We are better off with bodies because our intellects aren't powerful enough to learn very much from the angels. We will communicate with them, in our separated state, but the knowledge we acquire will be general and confused. Human minds do

much better working through phantasms: “in this way they acquire a distinct cognition of sensible things from the things themselves” (89.1c). Aquinas underscores this point in considering the objection that, if our separated souls will experience divine illumination, we might as well not bother to learn anything now. He replies, “The cognition we acquire here through effort is distinct and complete, whereas the other is confused. So it does not follow that the effort to learn is pointless” (89.3 ad 4). The knowledge we acquire here can be taken with us (89.5), and it will be superior, at least in some respects, to the knowledge we acquire from the angels. (The blessed will receive such knowledge as to be the equal of the angels, but that is another matter entirely. Here we are talking about a mode of cognition available to all separated souls, saved and damned.)¹²

I have already considered at length the difference between human and angelic cognition, and the limits Aquinas identifies in our own capacities (see §§10.4 and 10.5). There is no need to explore these issues further here, beyond noting the interesting way in which Aquinas both is and is not embracing the rationalism of the *Phaedo*. Aquinas agrees that the body prevents the intellect from making contact with a higher realm, separate from our physical world, and he agrees that understanding this realm should be the ultimate aim of human beings. These claims lead Plato to call for the philosopher to “free the soul from association with the body as much as possible” (65a). Here is where Aquinas disagrees. Although he concedes that the body is an inferior tool, and that the material world is not the ultimate reality, he regards the body as the tool best suited to our inferior minds, and the material world as the reality we are best suited to understand. Because he does not share Plato’s seemingly boundless optimism over the prospects of pure rational inquiry, Aquinas defends empiricism as the best method we have available. He holds the interesting position, in effect, of accepting much of Plato’s attack on empiricism, but insisting that empirical knowledge, for all its defects, is the best we can do by natural means – even if the angels do help us out. Aquinas is, we might say, a reluctant empiricist.

The human soul’s dramatic transformation presents Aquinas with a second difficulty. We have seen (in §12.2) that he characterizes this as a change to the soul’s “mode of existence” and hence a change to its “mode of operation” (89.1c). But we should wonder whether the soul, after such a transformation, should still be considered a *human* soul. Would it not be more plausible, in light of Aquinas’s account, to say that at death the human soul is transformed into an angel? Since angels and human beings belong to different species (75.7), this would entail that the human soul undergoes a substantial change at death, a change to its nature. But doesn’t that seem plausible, in light of how a separated soul will change?

We can sharpen this difficulty in several ways. First, we might focus on the transformation in mode of existence, and then recall Aquinas’s earlier

contention that “in its essence, the soul is the form of the body” (76.1 ad 4). If being the body’s form is essential to the soul, how can the soul be separated and remain a human soul? Second, we can focus on the transformation in mode of operation. Here we might consider a remark of Averroes’s, that if there were people who did not have to go through our laborious processes for acquiring knowledge, “they would be human beings equivocally, and indeed would seem more to be angels than human beings” (*De sompno*, p. 122). Aquinas certainly endorses this principle: he remarks, for instance, that “things with distinct natural operations differ in species” (75.7sc). Operations, in turn, are defined by their objects, and it seems that the separated soul does replace phantasms with a whole new set of objects. In what sense, then, is it still a human soul?

Aquinas is well aware of the danger here, and he attempts to block it in 89.1c. Immediately after claiming that the separated soul undergoes a change to its mode of existence, he adds that this is true “even though the soul’s nature remains the same.” But what entitles Aquinas to this claim? Does he think that being united to a human body is a contingent feature of the soul? No. He immediately adds, “this does *not* mean that being united to a body is accidental to the soul; instead, the soul is united to a body by reason of its own nature.” The same is true for its mode of operation: “turning toward phantasms is, for the soul, its natural mode of intellectual cognition.” The move Aquinas wants to make, then, is to identify the soul’s embodied modes of existence and operation as its natural modes, but still to allow that the soul can continue to exist when outside of these natural modes. Being united to a body and turning toward phantasms are *natural* and *proper* to the soul, but not *essential*.

The only real argument for this claim is the following analogy:

Similarly, the nature of something light does not change when in its proper place, which is natural for it, and when out of its proper place, which is foreign to its nature (89.1c).

This hardly seems satisfying. Something light, like helium, tends to move upward; it has an appetite upward, in Aquinas’s terms (§7.1). No one, however, would be tempted to regard location as an essential feature of something like helium. The changes a separated soul undergoes seem to be of an entirely different sort. But the analogy is better than it initially appears. For Aquinas can say that the separated soul has not really changed, no more than helium has when it changes location. The separated soul still would turn toward phantasms, if there were phantasms to be had, and it remains disposed to be attached to its body, if its body were available. As Aquinas said back in 76.1 ad 6, in offering the same analogy, the soul “maintains its natural readiness and inclination for union with its body.” Its new modes of existence and operation are *praeter naturam* (“foreign to its nature”), but do not indicate a change to its nature. The separated soul is like a fish out of water, existing and functioning as best it can.

Aquinas faces a further, closely related difficulty because of his claim that not all of the soul's capacities remain in it after death. Intellect and will "necessarily remain in the soul after the body is destroyed" (77.8c), but the bodily capacities of the sensory and nutritive soul do not. So when Aquinas says that the soul is incorruptible, he really means that the rational core of the soul is incorruptible. Most parts of the soul – most of its various capacities – are destroyed.

Aquinas does not address this specific concern in the Treatise, but he does in a discussion parallel to 77.8:

A whole is not complete [*integrum*] if certain of its parts are lacking. But the sensory capacities are parts of the soul. Therefore, if they were not in a separated soul, that separated soul would not be complete (*QDA* 19 obj. 4).

Aquinas replies by conceding that the sensory capacities are parts of the soul, conceding that they are not in the separated soul, and insisting that such capacities "are not essential or integral parts" (ad 4). But again Aquinas must be very careful, because he doesn't want to suggest that the human soul is essentially rational and nothing else. Human beings are rational *animals*, which entails that they have sensory capacities as well (§§2.1 and 4.2). It will not do, then, for such capacities to be merely accidental features of the human soul. His solution (see §5.3) is to say that although the soul's capacities are accidents belonging to the soul-body composite ("once the subject is destroyed, the accidents cannot remain" (77.8c)), they are generated by the soul's essence ("all the soul's capacities . . . flow from the essence of the soul as their basis" (77.6c)).

These deft maneuvers allow Aquinas to characterize the separated soul in just the way he wants. By denying that the soul's capacities are essential to it, he is able to claim that the soul survives separation. By associating the sensory capacities with the soul's essence, he is able to claim that the soul remains recognizably human. As before, the soul retains a kind of disposition: in this case, the sensory capacities "virtually remain in the soul, as in their source or root" (77.8c). One way to cash this out is to say that "in a separated soul, the power remains to introduce such capacities again, if it is united to a body" (IV *SENT* 44.3.3c). Again the desired conclusion is that the separated soul exists unchanged in essence, but in a way that is "foreign to its nature."¹³

12.4. Identity and resurrection

It is not customary to question the reality of death. We instead tend to ask whether there is life after death, whether human beings *survive* death. To put matters in these terms is to think of death as a well-attested physical event, the conclusion of the biological processes that give the human body life. So understood, a person's death does not necessarily entail ceasing to exist, only ceasing to exist in conjunction with that present body. On this cautious understanding of what death might be, it cannot even be right

to define death as the “permanent cessation of life” (*Webster’s New 20th Century Unabridged*). One form of life is the life of the mind, and if this continues then death does not mark the end of all life, only of some of the functions of life. The idea that death is not the end of life and existence, merely the separation of soul and body, goes back at least to Plato:

[Socrates:] Is death anything else than the separation of the soul from the body? Do we believe that death is this, namely, that the body comes to be separated by itself apart from the soul, and the soul comes to be separated by itself apart from the body? Is death anything else than that?

[Simmius:] No, that is what it is (*Phaedo* 64c).

Plato has Socrates take the view that he, Socrates, will survive death. When Crito asks, “How shall we bury you?” Socrates jokes, “In any way you like, if you can catch me . . .” (115c). In a sense, Plato is denying the reality of death, denying that Socrates’s death brings an end to his existence. But we can more accurately say that Plato is giving a *strictly biological* account of death. Death is something that happens to my body, not to me.

One might assume that Aquinas takes a similar view. This is in fact not so. Aquinas believes that when I die, I go out of existence. He does, like Plato, hold that “death in us occurs in virtue of the soul’s separation from the body” (III *SENT* 21.1.3c). But for Aquinas, as we will see, the soul’s separation causes death, and death puts an end to my existence. We might think of this as a *frankly metaphysical* account of death. Death is not a mere biological change, but a substantial change. *I* – the person, the human being – go out of existence.

Of course, Aquinas believes that I will come back into existence. To capture the miraculous nature of the resurrection it is important to see that it involves the resumption of a life that had ended: “resurrection, strictly, involves only someone who perishes and is destroyed” (IV *SENT* 43.1.4.1c). Under natural conditions, such things cannot occur: a substance, once destroyed, can never exist again. “It is not possible for numerically the same thing to be generated more than once” (CT I.154 [307]). Moreover, not even God could resurrect a wholly material entity. Human beings are a special case, however, because of their incorruptible soul. Because the soul continues to exist, “no interruption occurs in the substantial existence of the human being.” If not for this, a human being “could not return numerically the same, because of the interruption to his existence. This is what happens with other, corruptible beings” (IV *SENT* 44.1.1.2 ad 1).¹⁴ The uninterrupted existence of the soul is therefore necessary (but not sufficient) for the resurrection of the human being.

These remarks raise a set of further questions regarding separated souls. Most obviously, there is the question of why Aquinas does not follow Plato in holding that the separated soul’s existence counts as my existence. Don’t

I exist, as long as my soul exists? Before addressing this, we should consider a prior question: Can my soul, once separated, still be considered *my soul*?

There is a good argument for the negative. For it is generally supposed that matter is what individuates objects of the same species. Aquinas thinks, for instance, that no two angels can share the same species because of their immateriality:

Things that agree in species and differ numerically agree in form and are distinguished by matter. Therefore if angels are not composed of matter and form . . . it follows that it is impossible for there to be two angels of a single species (50.4c; the Epilogue considers a deeper explanation for this fact about the angels).

Judging from this argument, it would seem that no two separated souls ought to be of the same species, or else that there cannot be two separated souls. The Treatise frames an objection that pushes the latter conclusion:

By removing the cause, one removes the effect. Therefore, if human souls were multiplied according to the number of bodies, it would seem to follow that by taking away the bodies, one would not be left with multiple souls. Instead, from all those souls, only one thing would be left. This is heretical . . . (76.2 obj. 2).

Aquinas handles this objection by insisting that the number of souls merely “accords with” with the number of bodies. Souls are not actually individuated by their bodies. As a result, “after the bodies are destroyed, the souls remain in existence, multiplied” (ad 2).

This raises more questions than it answers. We should now wonder what it is that individuates separated souls. If these souls are all alike, then what explains their being numerically distinct? Why don’t we get the kind of ontological compression described in 76.2 obj. 2, that “from all those souls, only one thing would be left”? And, if these souls are not all alike, then why are they all members of the same species? Why are they still human souls? Must Aquinas abandon the principle he appeals to for angels: “things that agree in species and differ numerically *agree in form* and are distinguished by matter” (50.4c)? This is a dilemma. If separated souls are all alike, they can no longer be individuated. If they are not alike, they are no longer all human souls.

Aquinas’s solution looks rather pedestrian. He holds that separated souls are alike enough to qualify as members of the same species, but different enough to be individuals. Yet the way in which he makes this move is surprising. One might expect that Aquinas would account for differences between human souls in terms of the growing number of dispositions that the intellect and will accumulate over the course of a person’s life. Since Aquinas specifically maintains that the intellect’s dispositions are preserved in a separated soul (89.5), he could use these to individuate souls after death. The account would rest not on memories in the strict sense, since memory is a sensory power and hence destroyed at death, but on the intel-

lectual analogue of memories (79.6): our dispositions to believe certain things and choose in certain ways. This would move Aquinas toward a Lockean account of personal identity (*Essay* II.xxvii).

Yet this is not the move Aquinas makes. Instead, he holds that human souls, and all substantial forms, are shaped at the very start in accord with the matter to which they are united. The human soul, even as regards its essence, varies from individual to individual. This is quite a surprising view, because it seems to violate that basic tenet of Aristotelian metaphysics: members of the same species share the same form. These issues come to the fore when Aquinas considers whether one person can understand the same object better than another person can (85.7). Experience obviously suggests that this is so (sc). But there are several difficulties. One, which we need not concern ourselves with here, rests on the fact that understanding appears to be an all-or-nothing affair. A second, more relevant difficulty stems from explaining how two members of the same species could differ with regard to their intellects. Aquinas considers an objection:

The intellect is that which is most formal in a human being. But a difference in form causes a difference in species. Therefore if one human being understands more than another, it seems that they do not belong to the same species (85.7 obj. 3).

One line of reply would be to hold that, over the long run, intellects function differently because of differences in the dispositions they develop. (In effect, the more one knows the better one can think.) Aquinas doesn't make this move. Another reply would be that better sensory organs allow the intellect to think better. The body of the article does make this reply – not surprisingly, given how our sensory and intellectual processes are entwined (§§8.4 and 9.2–9.4). But Aquinas wants to make a further, more surprising reply: that two people can differ in the intrinsic quality of their minds, and hence differ in form. So he replies in this way:

A difference in form that comes solely from a distinct disposition of the matter produces no distinction in species, but only a numerical one. For distinct individuals have distinct forms, made distinct by their matter (85.7 ad 3).

In scholastic terms, Aquinas rejects the minor premise of the objection. A difference in form need not “cause a difference in species,” as long as the difference is caused by the matter.

Aquinas's position is not hard to understand if we think of wholly material beings, especially when one supposes that the distinction between matter and form is conceptual (see the *Excursus* to Part I). Differences in the matter of a thing should produce (even constitute) differences in its form. In *SCG* II.81, where he gives his clearest treatment of these issues, the principle is that “form and matter must always be proportioned and adapted to one another” (1620). As a result, substantial forms differ from individual to individual because of differences in the underlying matter,

even though the individuals belong to the same species: “the form of this fire and that fire differ in essence, but it is not the case that, as regards their species, there is a different fire or a different form” (1621).

This doctrine becomes rather mysterious, however, when Aquinas extends it, as he does in 85.7, to the immaterial human soul:

For it is clear that the better the body’s disposition, the better a soul it receives. This is clearly apparent in things that differ in species. The reason for it is that actuality and form are received in matter in keeping with the capacity [*capacitatem*] of the matter. So since, even among human beings, some of the bodies are better disposed, they receive [*sortiuntur*] a soul that has a greater power for intellective cognition.

Again Aquinas states the governing principle of proportionality, and here the principle is said to hold true because “better disposed” bodies “receive” more powerful intellects. But why should that be? Does God save the best minds for the best bodies? (Wouldn’t it be more fair to even things out?) When Aquinas talks about some bodies being “better disposed,” he means better disposed to carry out the business of cognition. Here is another version of the same doctrine:

Since every perfection is infused in matter in accord with the capacity of that matter, the soul’s nature will thus not be infused in different bodies in accord with the same worth and purity. So in each body it will have an existence that is limited by the scope of the body (I *SENT* 8.5.2 ad 6; see *InDA* II.19.110–14).

In each of these passages, Aquinas makes it clear that the mind itself – the soul’s immaterial component – is affected by the body’s condition.

All of this is certainly puzzling.¹⁵ Most fundamentally, it is unclear why the soul’s intrinsic mental qualities should have to be proportioned to the body’s condition. Aquinas does have a robust account of why inferior sensory powers make it harder *to use* intellect (§§8.4 and 9.4). But I can see no reason why any sort of bodily inferiority (sensory or otherwise) should make the intellect itself poorer. A second puzzle concerns the mechanisms involved: how does the body manage to put its stamp on the mind? By employing the passive voice (“are received,” “is limited”), the above passages leaves us in the dark. Now it cannot be the case that the body literally molds the soul: Aquinas always insists that “nothing corporeal can make an impression on something incorporeal” (84.6c). One open possibility is that God creates each soul so as to be proportioned to the body it will inform. Another possibility is that this proportion is guaranteed by the soul’s molding itself to the body. I can’t find decisive evidence in favor of either story.¹⁶

These puzzles aside, Aquinas is now in a position to explain how souls are individuated. Because no two souls are alike, separated souls will not collapse into one: they are individuated synchronically. “Just as it is impossible for an architect to use the instruments of a flutist, so it is impossible for one human being’s intellect to be another’s intellect” (*SCG*

II.73.1490). Souls are also individuated diachronically, inasmuch as the initial molding will endure for as long as the soul itself endures. Its individual character will remain, even in its unnaturally separated condition, and for that reason we can say that *my soul* remains, with all its strengths and weaknesses.

In §5.5, I presented evidence of a more general sort for the central place of individual essences in Aquinas's metaphysics. The conclusions of that discussion were, first, that the individual essence of a substance gives rise to "all of its singular accidents" (*QDV* 2.7c; see p. 168) and, second, that such essences are hidden from us. These twin theses yielded a disconcerting gap between the metaphysics and the epistemology: Aquinas wants to put these individualized essences to all kinds of work, and yet we are said to know virtually nothing about them. The present findings only add to the metaphysical burden these essences bear, and yet it seems to me that this new work for the theory makes it more attractive. For while there is a metaphysical and epistemological cost (a loss in parsimony and a gain in ignorance, respectively), the cost is now offset by an impressive gain in explanatory power. For the theory points the way toward a clear and attractive account of personal identity. Because Aquinas distinguishes between the soul's essence and its accidental powers (§5.2), he can allow that the soul changes over time (acquiring and losing dispositions of various sorts); yet he can maintain that there is an unchanging core within us, different from person to person, that makes us who we are. Aquinas frankly grants that we know virtually nothing of this inner essence; yet he can appeal to it as the basis for all of the more superficial characteristics (physical and mental) that we ordinarily take to mark the difference between one individual and another. In this way, we can view Aquinas as offering a metaphysical foundation for theories of personal identity that appeal to some kind of continuing self or ego underlying bodily and psychological change (e.g., Swinburne 1997, ch. 8; Baker 2000, ch. 5).

These remarks on how the soul is individuated point the way toward an account of personal identity. They do not, however, directly yield such an account, because Aquinas's view is more complex than first appears. To see why, consider that nothing has yet been said about what happens to me, the human being, at death. Although Aquinas believes that each of us has a distinctive soul, this alone doesn't yield a criterion for personal identity, because Aquinas doesn't believe the soul's survival is *sufficient* for the human being's survival. The resurrection of the body will be a genuine coming back to life of a substance that for a while did not exist. Although Aquinas believes a person's individual soul survives death, he nevertheless does not take Plato's strictly biological approach to death. His account is frankly metaphysical: "human beings are corrupted by death" (*SCG* IV.80.4139). The individual living substance – the human being, the person, Robert Pasnau, I – ceases to exist, and will not exist again until the final judgment. Aquinas makes this clear in a number of places.

Abraham's soul is not, strictly speaking, Abraham himself; it is rather a part of him (and so too for others). So Abraham's soul's having life would not suffice for Abraham's being alive. . . . The life of the whole compound is required: soul and body (IV *SENT* 43.1.1.1 ad 2; see 2a2ae 83.11 obj. 5 & ad 5).

The soul is part of the human species and so, even when it is separated, . . . neither the definition of a person nor the term applies to it (29.1 ad 5; see *QDP* 9.2 ad 14).

The soul, since it is *part* of the human body,¹⁷ is not the whole human being. My soul is not I. So even if the soul were to achieve salvation in another life, it would not be I or any human being (*InIC* 15.2.924).

All of these passages specifically concern the separated soul. Together they insist that the separated soul is not a person, not the whole human being, and not the individual that gets referred to by words like 'Abraham' and 'I.'

It is not surprising to see Aquinas deny that the separated soul is a human being. For he holds in general that "the nature of a species consists in . . . not the form alone, but the form *and* the matter" (75.4c). As a result, "it is part of the concept of *human being* to be composed of soul, flesh, and bones." Without the matter, a separated soul simply cannot meet this test. It is also not surprising to see Aquinas deny that a separated soul is a person, given that he makes no distinction at the human level between human beings and persons (§4.3). A person, like a human being, must be a complete substance, and the separated soul is not. The separated soul has an unstable existence, one that is "foreign to its nature" (§12.3). What is quite perplexing, however, is the claim that the separated soul is "not Abraham himself" and "not I." The most exact formulation of this point is that "Abraham's soul's having life would not suffice for Abraham's being alive" (as above). This makes it quite clear that Aquinas is taking a frankly metaphysical stance toward death. Even though Abraham's soul will survive, and continue to live, Abraham himself will not.

It may seem easy to reach this further conclusion. For if we assume that Abraham is essentially a human being or person, then it seems to follow, since Abraham's soul all by itself is not a human being or person, that "Abraham's soul's having life would not suffice for Abraham's being alive." Abraham's soul lacks an essential quality of Abraham: humanity or personhood. As far as I can see, this is a valid argument. In fact, I think it is an argument Aquinas would endorse. But it seems very hard to accept the conclusion. When we think about the soul's existence apart from the body, we are surely thinking about a situation in which *we* exist apart from the body. For if not we, then who? To put the point another way, Aquinas is committed to the separated soul's ongoing thinking and hence to its ongoing consciousness (§12.2). But if my soul continues to be conscious, then surely it continues to be me. The alternative is to say that my separated soul, while still my soul, is now someone else: not another person or another human being, but another conscious, thinking entity. This seems absurd. It also seems to fly in the face of how Aquinas himself conceives

of the separated soul. He indicates that separated souls will immediately go to heaven or hell (or purgatory), according to their deserts (IV *SENT* 45.1.1.2). But why should anyone (or anything) else suffer for *my* sins? He describes how the will of a separated soul desires reunification with its body (CT I.151 [300]). But won't this be *me*, wanting *my* body back? He discusses how the saints in heaven are able to intercede on our behalf (IV *SENT* 45.3), but it seems that on his view it should be only the souls of the saints, not the saints themselves, that are in heaven. Finally, and this is perhaps the crucial point, the whole function of a separated soul is to preserve *my* existence, to ensure that "no interruption occurs in the substantial existence of the human being" (IV *SENT* 44.1.1.2 ad 1). But if I, the human being, go out of existence, and if some other thinking thing takes my place, then how does that soul's continuing existence contribute to *my* resurrection?

It is fairly clear why Aquinas is in this predicament. First, he treats as axiomatic Aristotle's commitment to the essentiality of species membership.

It is impossible for a thing still to remain the same, if it is entirely transferred out of its species, just as the same animal could not at one time be, and at another time not be, a human being (*Topics* IV 5, 125b37–39; see §4.3).

At the same time, Aquinas insists that the soul by itself is not human. Given the conjunction of these views, there's no way around the conclusion that I cease to exist when my soul separates from a human body. In one respect, Aquinas welcomes this conclusion, because it helps to establish the crucial place of bodily resurrection. But in another respect he does not seem to have sufficiently considered the implications of his view: for he shows no signs of coming to grips with the puzzling question of who my separated soul will be, if not I.

Aquinas could conceivably stand his ground. He would have to grant that my separated soul will be a different, nonhuman but intelligent entity that lives only for the time between my death and the general resurrection. He would have to clarify why it is reasonable to treat separated souls in some ways as if they were the same person. Above all, he would have to insist that the existence of this doppelgänger supplies the continuity required to insure *my* resurrection. Perhaps this is not an incoherent view. But it seems highly implausible.

I see only two other options. First, he might abandon the assumption that I am essentially a human being. This would allow him to say that I continue existing as a separated soul, even though I am for a time not human. This might be a defensible strategy, but it is clearly not Aquinas's strategy. He repeatedly denies that I will continue existing as a separated soul, and he takes the essentiality of species membership as fundamental.

Second, Aquinas might abandon the assumption that personal survival is an all-or-nothing affair. It is natural to suppose that I either exist or do

not, and that there is no middle ground, no way to make sense of partial existence.¹⁸ Yet Aquinas's overall account becomes credible, so far as I can see, only on the rejection of this assumption. When he says "my soul is not I," we should take this to mean that a person's soul is not *entirely* that person. If then asked who or what a separated soul becomes, Aquinas should say that it doesn't become anyone or anything at all: it stays what it was, a part of a person. So when I die, I cease to exist, as a whole, but part of me continues to exist, and hence I partly continue to exist. If I do not partly continue to exist, I will never exist again, because the necessary continuity will be disrupted.

It would not be implausible to hold that this is Aquinas's tacit view about the logic of personal identity. Or, in a less charitable mode, one might hold only that this should have been Aquinas's view, given the rest of what he wants to claim. In any case, such partial survival makes good sense in the context of the separated soul. Such a soul will continue to possess the mental qualities that it possessed in this life, insightful or dull, tenacious or irresolute. It will also hold onto all of the knowledge acquired in this life (89.5) and will be able to continue making use of that knowledge (89.6). These psychological dispositions are not enough to make that soul entirely me, however, because Aquinas is committed to the essentiality of species membership (here the disagreement with Locke is especially stark), and convinced that the life of a separated soul would not be fully human. Lacking all sensory experiences and physical emotions, and lacking even the capacity to imagine or remember such things (77.8), the life of a soul without the senses will be "more like sleep than like waking" (IV *SENT* 44.2.1.3c).

In light of these remarks, it is no wonder that Aquinas wants to say that "Abraham's soul is not, *strictly speaking*, Abraham himself" (IV *SENT* 43.1.1.1 ad 2, as above). Abraham's soul is not fully human, and the life of Abraham's soul is not the full life of Abraham himself. It is half a life, a merely intellectual life, which for human beings is not a full life. To see the force of Aquinas's view, it is crucial to recognize just how much of what we are depends on the body. One can lose both legs or both eyes and still lead a fully human life. But one cannot lose the entire body. Earlier chapters have paved the way toward this conclusion, by stressing how the characteristic operations of a human being are a result of complexly inter-related processes, processes that require a certain sort of body and a certain sort of mind. Even operations that seem purely intellectual depend crucially on the internal senses (see esp. §§8.4 and 9.4), and although a separated intellect can continue functioning (§12.2), it will do so in a foreign and inept way (§12.3). Without both mind and body, then, most of the operations that make us human will not occur, and to that extent we will not exist. Yet such judgments of existence should not be seen as all-or-nothing, because it is possible for some of the operations to exist without the others (§12.2), and hence possible for the human being to exist in part.

Although Aquinas's account of death is frankly metaphysical, that frankness is tempered by a flexible conception of survival.

So my separated soul is not anyone other than I, and in a sense it is I, but it is not fully I, not I in the strictest sense. The soul's survival is a necessary condition for personal identity, not a sufficient condition. The soul is responsible for all of what makes me be me, in the sense that my defining attributes, physical and mental, "flow from" that soul (77.6c; see §5.2). But unless those attributes are actually instantiated, I do not (strictly, fully) exist. The core of who I am is my soul, but it is not all of who I am.

Though my survival may not be an all-or-nothing proposition, Aquinas imposes strict requirements on full-fledged personal identity: one must have the same soul and the same body. Hence he believes that complete survival requires the resurrection of the body. Aquinas often stresses that not just any sort of survival would satisfy the aspirations of human beings.

The end of the world as we know it

The world will end with the sound of a trumpet. *For the Lord himself will descend from the heavens with a command, with the voice of the Archangel, with the trumpet of God* (1 Thess. 4, 15/16). At that, the celestial bodies cease to move – a miraculous event for objects that are by nature incorruptible and perpetually moving. When the heavens stop moving, all living things die, and indeed everything on earth collapses into its basic elements: earth, air, fire, water. This is an entirely natural consequence of that first miraculous event, because it is the celestial bodies that sustain life on earth. When they come to a halt, all plants and animals are destroyed. What remains is a barren landscape of raw matter (not prime matter, but the basic elements) and the separated souls of all the human beings that have ever lived.

In the midst of this apocalyptic soup, God now performs another miracle. He reunites each soul with some version of its original body. Of course, since our bodies are constantly changing, it is not clear how to understand this. Aquinas decides that we will be resurrected at what was (or would have been) our body's peak physical condition, full grown but not yet aging (IV *SENT* 44.1.3.1). In this way, we are brought back to life with the same soul and same body. Thus we survive death, for better or worse, depending on the outcome of God's final judgment. (For more details, as much as anyone could want, see IV *SENT* dd. 43–50; *SCG* IV.79–97; *CT* I.153–84.)

Without the hope of a better life to come, "death would without doubt be dreaded intensely, and a human being would do anything bad before suffering death" (*In symbolum* 11.1001). To give ourselves such hope, Aquinas says that we must put our faith not just in any sort of afterlife, but in the words of the Apostle's Creed, in the resurrection of the flesh.

The resurrection is not something that Aquinas regards as provable, and so it is not a subject that belongs, strictly speaking, in a philosophical study. Accordingly, Aquinas tends to separate discussion of the resurrection from discussion of human nature, which is why the Treatise concludes *in medias res*, with a discussion of separated substances. Still, our discussion of personal identity will not be complete until we consider why Aquinas believes that separated souls must be reunited with the same bodies that they once had. Several Biblical passages support this claim of numerical sameness:

For what is corruptible must put on incorruptibility (1 Cor. 15, 53).

I know that my Redeemer lives, and in the last day I will rise from the earth. And I will be clothed again with my skin, and in my flesh I will see God (Job 19, 25–26).¹⁹

Aquinas also has philosophical reasons for supposing that the resurrection will return us to the bodies we once had. Naturally, those reasons rest on considerations of personal identity. But his argument is not what one might suppose. Although having numerically the same body is a necessary condition for full identity, it does not enter *directly* into the conditions for identity. Sameness of body is required *indirectly*, inasmuch as the soul can unite only with the right sort of body. As we saw earlier in this section, Aquinas thinks the soul molds itself to its body. But because the soul cannot remold itself, without losing its identity, it must be reunited with that same body. If it were possible for my soul to be united with a different body, then I might be resurrected without my body's being resurrected. But this is not possible; my soul has been uniquely adapted to fit my body. Sameness of body is therefore required indirectly, inasmuch as the same soul is required, and inasmuch as that soul can inform only the same body. God, therefore, if he is to bring me back to life, must go to the trouble of reassembling my old body.

This is not my attempt to reconstruct Aquinas's argument; this is the argument he himself gives for why "the soul will reassume entirely the same body" (*CT* I.153). First he makes the case for why a human soul must be resurrected in a body of the same species:

Since soul is united to body as its form, and since for every form there corresponds the proper matter, it is necessary that the body to which the soul will again be united be of the same character and species as the body it set aside at death (*CT* I.153 [304]).

Aquinas takes this to refute those who believe human souls might be reincarnated in the bodies of other living things, or even in some kind of celestial body. Next, Aquinas extends this same argument to cover numerical sameness:

12.4. IDENTITY AND RESURRECTION

Just as specifically the same matter is needed for specifically the same form, so numerically the same matter is needed for numerically the same form. For just as a cow's soul cannot be the soul of a horse's body, so one cow's soul cannot be another cow's soul. Therefore, since numerically the same rational soul remains, it must be united again at the resurrection with numerically the same body (*CT* I.153 [305]).

This argument from proportionality is the only argument Aquinas offers here. We should ask ourselves why he would make such an indirect argument if sameness of body enters directly into the conditions for identity.²⁰

Aquinas criticizes others for ignoring the proportionality between form and matter, and he even indicates that this mistake leads to heresy as regards the resurrection. Origen had held that souls are placed into better or worse bodies depending on their merit (see **Luck of the Draw**, p. 117). Aquinas replies,

It will follow that the rational soul could later be assigned to a different body – not just that a human soul would assume a different human body, but even that it would sometimes assume a heavenly body. . . . This is plainly mistaken philosophically, inasmuch as determinate matter and moveables are assigned determinate forms and movers. It is also plainly heretical, according to the faith, which teaches that the soul in the resurrection takes up again the same body that it had lost (*SCG* II.44.1209).

The heresy is the suggestion that the human soul might be resurrected in a different body. But what leads to the heresy is nothing other than the denial of the metaphysical principle that form must correspond to matter. The metaphysics provides a basis for the theological dogma.

These accounts of the resurrection reveal something important about Aquinas's metaphysics. Contrary to what is generally supposed, matter is not Aquinas's principle of individuation for material substances. Aquinas often does call matter the *principium individuationis*, but it is important to notice *what* matter is said to individuate. Matter is not that which individuates the whole substance (at least not directly), but that which individuates the form. Aquinas tells us as much, repeatedly:

Matter, as it stands under signate dimensions, is the principle of individuation *of the form* (*InMet* 5.8.876).

If a form is naturally suited to be . . . the act of some matter, then *that form* can be individuated and multiplied by its relationship to the matter (*De unitate* 5.75–78 [249]).

Distinct individuals have distinct *forms* made distinct by their matter (85.7 ad 3).

Matter is the principle of individuation . . . when considered in the singular, which is signate matter existing under determinate dimensions. For *a form* is individuated by this (*QDV* 10.5c).

. . . individual signate matter and the *form* individuated by such matter (119.1c).

The *natures* of created things are individuated by matter which is subjected to the nature of the species (39.1 ad 3).

... the individuating material conditions, by which a *nature* that is specifically one is numerically multiplied in different individuals (*QDA* 3 ad 7).

For material substances, matter is the ultimate *principium* – the basis or starting point – of individuation. But it is more accurate to say that matter individuates the form, and that the form individuates the substance.

This understanding of how matter individuates allows us to explain a very puzzling feature of Aquinas's account. Although he includes a material thing's individual matter among the necessary conditions of identity over time, he recognizes that a thing's matter is constantly and thoroughly changing:

The human body, over one's lifetime, does not always have the same parts materially, but only specifically. Materially, the parts come and go, and this does not prevent a human being from being numerically one from the beginning of his life until the end (*SCG* IV.81.4157; see 119.1 obj. 5).

Why doesn't this prevent numerical identity over time? Aquinas seems to have no answer, other than to say that the matter is the same inasmuch as it is taken up within the same form. And that seems to undermine his claim that matter, not form, is the principle of individuation.²¹ Many commentators have been stumped. Sandra Edwards (1985a) concludes that Aquinas's account "is certainly incomplete and inadequate as it stands. ... Aquinas has unfortunately fallen short in his explanation ..." (pp. 161–62). Christopher Hughes (1996) doubts that "Aquinas can truly or consistently hold that matter is the principle of individuation" (p. 1). It is hard to see how to salvage Aquinas's account as long as one supposes that matter enters directly into the conditions for identity over time. But once matter is seen to play its role indirectly, the solution becomes obvious. What holds a substance together over time, individuating it, is its individual form. The underlying matter can change constantly and thoroughly, just as long as it remains properly proportioned to the form. There is therefore no need for the matter to remain numerically the same, or even for its different stages to be continuous. What matters is that the form be joined to matter that is qualitatively the same as the matter the soul originally informed. In this way, matter is the basis of individuation. But it does that work at the start, in individuating the form. From that point on, changes to the matter do not interfere with the substance's numerical identity. Thus Aquinas can remark: "the soul's individuation and multiplication depends on the body at its start [*principium*], but not at its end" (*De ente* 5.69–71 [31]; see I *SENT* 8.5.2 ad 6).

By holding that matter enters into the conditions of identity only indirectly, Aquinas is able to avoid many standard objections to his account. Since personal identity does not directly rest on the body's numerical sameness, Aquinas need not explain how numerically the same body can

be destroyed and then recreated. The question of whether the resurrected body is the same body or merely a replica does not arise, because sameness of body is accounted for in terms of sameness of form. It remains essential to human survival that one possess a human body just like the body that one formerly had (qualitatively rather than quantitatively the same). Hence full survival requires the resurrection. But what preserves identity over time, through death and separation, is the incorruptible essence of the human soul, whose numerical sameness over time is unproblematic. (Cf. the criticisms in Flew 1967, Mavrodes 1977, van Inwagen 1978.)

We can now understand why Aquinas is forced to rely on the indirect proportionality argument for the resurrection. But we should concede that the argument is not demonstrative. Aquinas has not proved that the soul “*must* be united again at the resurrection with *numerically* the same body” (CT I.153.305, as above), because there are other ways in which the resurrection might happen. For instance, it seems that God could, for any given soul, produce a new body proportioned in just the right way. Aquinas never rules out this possibility. In fact, he seems to encourage such a thing when he allows that, in a wide range of cases where there is not enough existent material to compose a mature and complete resurrected body, God will simply supply any material that is lacking (see, e.g., SCG IV.81.4157–58). If we allow this, why not go all the way and allow that God could give a separated soul an entirely new body – tailored, of course, to fit the soul’s particular condition?

No doubt there are other such possibilities, given God’s power. So Aquinas cannot be said to have established that the resurrection of my original body is *necessary* – not even on the assumption that I will live again. This failure isn’t surprising, however, because his theory of personal identity requires only qualitative sameness of body, not numerical sameness. The failure isn’t particularly embarrassing, either, because Aquinas doesn’t regard the resurrection as amenable to proof. The resurrection can be supported by argument and its plausibility can be enhanced by careful analysis. But there is no way to establish that the Christian story is the only possible story.²²

Epilogue: Why did God make me?

*What is man, that thou art mindful of
him?*

Psalm 8, 4/5

Though Copernicus has been dead for over 450 years, we continue to place ourselves at the center of the moral universe. According to the great moral theories of our time, it is we human beings who are the measure of good and evil. For Mill, our pleasure is “the ultimate end, with reference to and for the sake of which all other things are desirable” (*Utilitarianism*, p. 262). For Kant, all of morality can be derived from the principle that human beings should be treated “never merely as a means, but always at the same time as an end” (*Groundwork*, p. 38). The present Catholic Pope gives voice to an almost universal assumption, across religions and cultures, when he speaks of “the incomparable value of every human person” (John Paul II, 1995; see §4.3 at end).

None of these accounts limits the scope of morality to human beings. Mill allows that the pleasure of other animals might carry some moral weight. Kant thinks that his categorical imperative applies to all rational beings that might exist. The Pope takes the value of human life to derive from God. But these three very different thinkers all agree in the absolute value they place on humanity. Though they clash dramatically in their evaluations of what the good for human beings consists in, they agree in giving us an ultimate standing in the moral calculus.

All this would have been quite foreign to Thomas Aquinas. Far from placing human beings at the center of the moral universe, Aquinas conceives of us as just one small part of creation, excellent in our own way but dwarfed in the grand scheme of things. Far from supposing that God created the universe for our sake, Aquinas believes that we were created for God’s sake, as a manifestation of his goodness. Whereas we tend to imagine that the goodness and justness of the world is a function of how well we fare in it, Aquinas believes that the world would be equally good regardless of our welfare, regardless of our existence, and regardless of whether there is even a created world at all.

These striking views are a surprising consequence of God’s infinite goodness. If God were only an extremely good and powerful being, then his goodness and power would require him to labor mightily to make the world as good as possible. We might then be able to infer something about

the limits of this demigod's power (or his goodness, or even his existence) from the imperfection of the world around us. But because God is infinitely good, the universe is infinitely good, and so God is under no obligation to create more goodness – indeed, God could not create more goodness, because any finite goodness that he might create would not make the world any better. (As Aquinas was well aware (II *SENT* 1.1.5 ad sc 4), no infinite number can be increased by adding a finite number to it.) God is in a zero-sum game, of a delightful sort, where the world is perfect no matter what he does.¹

Aquinas uses these considerations to establish God's absolute freedom:

Since God's goodness is perfect, and he can exist without other things (since none of his perfection comes to him from others), it follows that there is no absolute necessity that he will things other than himself (19.3c).

There are infinitely many ways in which God might act or not act, consistent with his perfect goodness, and God's omnipotence ensures that he could have chosen any one of those paths: a path on which there are $10^{100,000}$ human beings, or no human beings, or no creatures at all. So among the various appropriate paths that God might have gone down, why choose creation? Though creation cannot bring any advantage to God, it is nevertheless a good thing: good not because of the benefit it brings to creatures, but because the created world serves to manifest God's perfect goodness:

God wants creatures to exist so that in them his goodness is manifested, and so that his goodness, which by its essence cannot be *multiplied*, is at least *spread out* over many by participation in his likeness (*QDV* 23.1 ad 3).

Hence a Roman Catholic catechism for children begins:

Who made you? *God made me.*
Why did God make you? *To express his glory and make me happy in heaven.*²

But on Aquinas's view it is misleading even to say that God created human beings in order to make us happy in heaven. This of course is our immediate end, as individuals. But we serve a larger, more significant purpose, the manifestation of God's goodness, and in that larger context we are simply the means to God's end. Aquinas insists on this clearly and repeatedly: "God wills his own goodness as an end, and wills *everything else* as the means to that end" (*SCG* I.86.718); "The creatures that God wills stand to the divine will not as ends, but as directed toward his end" (*QDV* 23.1 ad 3).

This is a view we now find hard to take. One of the most striking differences between the medieval and the modern world views is the respect and dignity we accord ourselves. Modern readers find it shocking that Geoffrey Chaucer, at the end of his life (d. 1400), could retract all of his greatest works, and beg the forgiveness of God for these "worldly vanities" (envoy to Parson's Tale, p. 265). Chaucer had a medieval conception

of his place in the universe, revealed not by the strength of his religious faith but by a lack of faith in his own worth as compared with God. Ours is the age of humanism, as exemplified by Kant, who took human autonomy to the point of insisting that not even God can use us as mere means. As rational beings, we are owed respect as ends in our own right; in effect, we are the moral equals of God.³ Mill, working from a very different theoretical perspective, betrays a similar bias toward human autonomy:

If it be a true belief that God desires, above all things, the happiness of his creatures, and that this was his purpose in their creation, utility is not only not a godless doctrine, but more profoundly religious than any other (*Utilitarianism*, p. 273).

Aquinas would be appalled by Kant's arrogance, and would reject every premise of Mill's argument. God does not desire our happiness above all things, on any construal of 'happiness,' and he did not create us so that we would be happy, except insofar as this accomplishes his own ultimate goal. That now sounds like a hard doctrine. But Aquinas regards the manifestation of God's glory and goodness as a goal vastly more worthy than simply making us happy. The finite goods that we might attain are entirely overshadowed by the perfect goodness that is God.

Of course, the created world could not manifest God's goodness, even imperfectly, if it were not itself good. Aquinas thinks the created world is good, despite its finite scope; it cannot add to God's glory, or even adequately manifest it, but it can serve as a kind of dim likeness of the Eternal Good. That likeness comes through most clearly in its rational beings, the best part of creation: "intellect is the ultimate perfection aimed at in the operation of nature" (*InDA* II.6.73-74). Indeed, the entire corporeal world has in a sense been created for our sake: "the human being is the end of all generation" (*SCG* III.22.2030); "creatures that are beneath human beings exist for the sake of human beings" (65.2c). Of course, Aquinas immediately qualifies these remarks by adding that everything, ultimately, exists for the sake of God. But this proviso seems to leave considerable room for human worth and dignity: creatures may count as nothing in comparison to their creator, but at least we are the best of a finite bunch.

In fact, not even this much can be said. We are one of a vast number of species, and though many of these species are part of the corruptible, corporeal world that lies subservient to us, an even greater number of species rises above us, closer to God and more beloved by him. These are, of course, the angels, who "exceed in number, incomparably, material substances" (50.3c). Aquinas famously believes that each angel is one of a kind; what is less well known is that he believes in a vast, vast hierarchy of such kinds. There are not only more species of angels than there are species in the material world, there are even more angels than there are material individuals – "incomparably" more. The number of angels is "maximal" and so it "exceeds every material multitude" (50.3c). This suggests that there are more angels than there are physical particles in the universe.

The reason there are so many angels (and Aquinas's primary grounds for making this claim) is that "to the extent things are more perfect, to that extent they are created by God in greater measure" (ibid.). Now it seems that Aquinas can not take this kind of reasoning as demonstrative, because then it would entail that God must necessarily create all of those angels. But though Aquinas's ambitions to map creation may come into some tension with his views about God's absolute freedom, the more interesting point for now is the assumption that angels are superior to human beings. Their superiority of course stems from their minds, which are superior to ours in every respect (§§10.4 and 10.5), including the fact that they need no sensory images, and hence need no attached body (§9.4). As a result, they are more in God's image than we are (93.3), and more loved by God than we are (20.4 ad 2). They do work to guide us (§12.2), and in that sense might be said to be "for our sake," but this is like a peasant's supposing that a king who keeps the peace exists for the sake of that peasant (II *SENT* 1.2.3 ad 3; the analogy seems inspired by Maimonides, *Guide*, p. 276).

As an objection to the relative superiority of the angels, Aquinas considers the incarnation: *For God so loved the world, that he gave his only begotten Son* (John 3,16). His reply is that Christ died for us because this is what we needed; analogously, "a good head of household will give something of great value to a sick servant that he does not give to a healthy son" (20.4 ad 2; see *SCG* IV.53.3937). Moreover, although it is true that the physical world was created for our sake, this too is a reflection of our imperfect, needy natures. The world around us serves us in two ways (IV *SENT* 48.2.1c), by sustaining our physical lives, and by helping us to an awareness of God: *for the invisible things of him, from the creation of the world, are clearly seen* (Rom. 1,20). The angels of course need help in neither way, and so the world was not created for them. We need both kinds of help because of our dependence, physical and mental, on the corporeal world.

Among intellectual natures, the rational soul (the form of human beings) is by far the closest to the body. *Therefore* all of corporeal nature seems to be for the sake of human beings in a certain way, insofar as we are rational animals (*CT* I.148 [297]).

The world was created for us – not because we lie at the center of it, but because of our peculiar status as rational animals, partly spiritual and partly physical, partly mind and partly body.⁴

Aquinas does not go on to argue that we exist for the sake of the angels: there is nothing we can do to benefit the angels. He does sometimes note the traditional view that human beings were created to replace the fallen angels, but he takes this to be an incidental benefit, not "the principal end" of our creation (II *SENT* 3.2.1 ad 3). Our principal end is to use our minds as well as possible, which ultimately requires a knowledge and love of God available only through the beatific vision. Hence "the ultimate perfection, which is the end of the entire universe, is the perfect beatitude of the saints,

which will occur at the final culmination of the ages” (73.1c). This is what the entire (physical) universe is ordered toward: the birds and the trees, rocks and fish, are all organized so as to bring about this end. Once again, the angels are another story: in fact, our beatitude simply elevates us by grace to a level that the angels already occupy by nature (108.8). But still this line of thought helps counterbalance the debasing tendency of Aquinas’s other remarks. In this context he even comes close to the Kantian mode, remarking:

Only intellectual natures pursue God in their own right, by cognizing and loving him. Therefore only intellectual natures are sought for their own sake in the universe, whereas everything else is sought for the sake of them (*SCG* III.112.2858).

But Aquinas goes on to qualify this remark in the way we should now expect: human beings are sought for their own sake only in the sense that they are not created for the well-being (*utilitas*) of anything else; still, “we do not mean that they are not further referred to God and to the perfection of the universe” (2865).

As we should expect, the ultimate end of creation is not us but God, and so we are “further referred to God.” But we are also further referred to “the perfection of the universe,” and this is a remark that deserves special attention. Aquinas describes a hierarchy of ends in the universe as a whole:

- [First], each creature exists for the sake of its own proper act and perfection.
- Second, less noble creatures exist for the sake of those that are more noble. . . .
- Next, individual creatures exist for the sake of the perfection of the whole universe.
- Next, the whole universe, with its individual parts, is ordered to God as its end, inasmuch as, by a kind of imitation, the universe represents divine goodness for the glory of God (65.2c).

The last grade in this hierarchy represents God’s immediate aim in creation: “God principally wills the good of the whole of his effects rather than any particular good” (*SCG* I.85.712). So it is the perfection of the universe as a whole, rather than human beings in particular, that is God’s immediate aim. Indeed, there are particular, contingent things only because this contributes to the greater whole: “the completion of the universe requires there to be some contingent things; otherwise the universe would not contain all grades of beings” (*ibid.*).

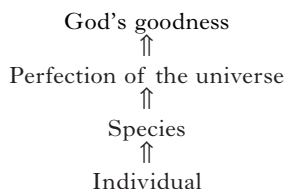
Here we encounter Aquinas’s well-known view that the perfection of the universe requires a well-ordered set of created species, stretching from the lowly physical elements all the way up to God. A single finite species, no matter how perfect, could not imitate God even remotely: “if only one grade of goodness were found in things, the universe would not be perfect” (47.2c; see *SCG* II.45 for extended argument). Aquinas uses these

considerations to argue for the existence of angels (*QDSC* 5c), and for the vast number of angelic species, ordered from highest to lowest in terms of intelligence. He likewise replies to the reasonable question of why God didn't just eliminate stones and so on and make it angels all the way down:

The perfection of the universe is marked essentially by the diversity of natures, by which the diverse grades of goodness are filled up, and not by the multiplication of individuals in a single nature (I *SENT* 44.1.2 ad 6).

The created world therefore consists in a vast chain of beings, with a different species for every link, designed cumulatively to manifest God's glory and goodness.⁵

The startling suggestion is that, far from being the ultimate end of creation, we are thrice removed from that ultimate end.



Aquinas is very clear on the point that individuals contribute to the perfection of the universe only in virtue of their species. "The perfection of the universe is marked in terms of species, not individuals" (*SCG* II.84.1689). The ultimate reason why there are hundreds of thousands of house finches (*Carpodacus mexicanus*), but only one angel per species, is that there is no worry about an angelic species going extinct:

For things that are incorruptible, there is only one individual in each species, because the species is adequately preserved in that one. But for things that are generable and corruptible, there are many individuals in each species, to preserve the species (47.2c).

Here Aquinas seems to hold that we are valuable not as individuals, but only as instantiations of a kind.

This last claim is most startling of all. It suggests that from God's perspective neither you nor I have value as individuals, beyond the general value that our kind has as a part of the grand scheme of things. Moreover, if you and I have value only "to preserve the species," then in a world with six billion people we would seem entirely expendable. Outrageous as these suggestions may seem, Aquinas comes close to endorsing them:

The perfection of the universe consists essentially in its species, accidentally in its individuals. Therefore since the multiplication of [human] souls involves a difference not in species but only in number, it follows that the many souls created every day contribute nothing to the perfection of the universe essentially, but only accidentally (II *SENT* 17.2.2 ad 6).

The animals

Aquinas's moral attitude toward other animals is more subtle and interesting than first appears. Following Psalm 8,6–8 (*You have put all things under his feet . . .*), he subscribes to the traditional view that the natural world exists for our sake and should be used accordingly: for food, clothing, transportation, even intellectual inspiration (*SCG* III.22.2031). This doesn't necessarily mean that we should do whatever we like with nature. After all, we have seen that as other animals exist for our sake, so we exist for God's sake. One might even propose that we should care for nature just as God cares for us. But this is not how Aquinas describes the situation. He explicitly gives us the right to kill animals for our own benefit. He even argues, following I Corinthians 9,9 (*Does God care about oxen?* (No, St. Paul says)), that cruelty to animals is wrong not in its own right, but only because (1) it inclines us to be cruel to each other; (2) it comes back to harm us in the long run (e.g., by reducing animal populations); or (3) it has negative symbolic connotations (*SCG* III.112.2867–68). Though most would find this view abhorrent today, Aquinas is at least consistent in his claims. The widespread modern views that cruelty to animals is immoral, but eating them (for example) is not, seems flatly incoherent given the pervasive cruelties of modern animal agriculture.

There is more to Aquinas's view, however, than this sort of brutal consistency. Despite showing little concern for the welfare of individual animals, his larger world view implies that we should have the utmost concern for nature at the level of whole species and ecosystems. Although the natural world is for our sake, we in turn are simply part of the larger pattern of creation – and not even a particularly exalted part. God's primary concern is with the perfection of the whole, which is based on the complexly interwoven hierarchy of species. We contribute to that larger perfection, but merely as a part of it. It would, then, hardly be appropriate for us to benefit ourselves at the expense of that whole, if as a result we were to destroy the larger fabric of nature.

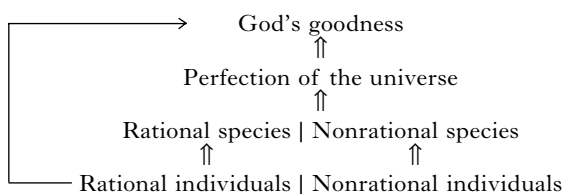
We know of some 1.4 million species of living things, and it is likely that at least ten times that number are unknown. Of the species we know about, a quarter of all mammals are endangered, as are 10 percent of birds, and one in eight plant species (*New York Times*, June 2, 1998, supp. pp. 1, 10). Aquinas's principles suggest a plausible form of environmentalism, concerned with balancing our use of individuals with our responsibility to protect the broader framework of nature. This captures the common sentiment that while the death of thousands of individual animals may be sad, the extinction of a whole species is something beyond sad – that it is, indeed, something unacceptable at any price.

The accidental perfection that Aquinas refers to here is clearly the benefit that comes from ensuring the survival of the species. In a later work he makes much the same point, more starkly:

Singulars are part of the perfection of nature not intrinsically [*propter se*] but derivatively [*propter aliud*] – inasmuch as the species that nature intends are preserved in them. For nature intends to generate human being, not this particular human being – except insofar as human being cannot exist except as this particular human being (*QDA* 18c).⁶

Nature – God, I take it – does not directly intend to create you or me, because we don’t directly contribute to nature’s perfection. As individuals, we seem to have incidental value, at most.

Despite what a number of passages suggest, this is not a conclusion that Aquinas wants. He does think that individual sheep and oxen have this sort of merely incidental value, for these very reasons. But human beings are qualitatively different in this regard, because of our capacity to exemplify God’s goodness in a special way. We are not just a passive reflection of God: we seek him and come to love and understand him, and this means that we contribute to the perfection of the universe in a special way. After describing how “individual creatures exist for the sake of the perfection of the whole universe,” and “the whole universe, with its individual parts, is ordered to God as its end” (65.2c, quoted above), Aquinas immediately goes on to make an important qualification: “In a special way beyond this, rational creatures have as their end God, whom they can attain by their own operation, in cognizing and loving him.” With this qualification, we are no longer thrice-removed from being ends in our own right. Aquinas’s account now looks like this:



Rational beings – we and the angels – manifest God’s glory both through our place in the grand scheme of things and through our individual cognitive relationships to God. It is with this doctrine in mind that Aquinas makes the remarks quoted earlier: “only intellectual natures are sought for their own sake in the universe” (*SCG* III.112.2858); “the end of the entire universe is the perfect beatitude of the saints” (73.1c). We are still not ultimate ends, but at least we are now only one step away from the ultimate end that is God.

There might now seem to be some tension in Aquinas’s account, between an inclination to say both that individuals are valuable only as members of a species and that rational individuals are valuable in their own right. I think this tension can be resolved. It is Aquinas’s surprising view, stated

clearly and repeatedly, that individuals do not make the world more perfect. If we consider only the perfection of the universe, then you and I make at best an indirect contribution. But you and I can contribute directly to the ultimate end, the goodness and glory of God, because our coming to know God is itself a way of manifesting God's goodness. In this way we have worth as individuals that transcends the abstract perfection displayed by the chain of being.

To understand this dual role played by rational individuals, it is helpful to see more clearly what Aquinas means when he speaks of our manifesting God's goodness. One might get the idea that God's goal is to put his goodness on display, by first creating a world that serves as a visible mirror of that goodness and then creating beings that have the capacity to see that mirror for what it is. The suggestion might be that God's perfection is somehow wasted if not displayed to creatures able to appreciate it. Or, more plausibly, it might be that God simply sees some value in putting his goodness on display in this way, and creating an audience able to appreciate it. But I think that even this latter suggestion has to be rejected. The point of creation is not to show off God's goodness: we should not suppose that God is so vain as to have the desire to put himself on display, or so pathetic as to need to create an audience that would admire his greatness.

God's desire to manifest his goodness does not imply a desire to put himself on display. It implies only that God seeks to create goodness in the only way possible: by creating some kind of pale reflection of the perfect goodness that already exists. Given that (in virtue of God) the universe is already, necessarily, perfectly good, it follows that any created good can only be a reflection of that perfect goodness. In creating, God "intends only to share his perfection, which is his goodness" (44.4c). So God creates a vast hierarchy of species as a reflection of his complex goodness and wisdom. And within that hierarchy he creates individuals capable of dimly grasping the nature of God's goodness and wisdom – not because God wants an audience, but because the act of understanding and loving God is itself a way of being like God. It is, indeed, as close as creatures can come to being like God, and hence as close as they can come to sharing in God's perfect goodness (see 50.1c).

So why did God make me? Certainly, the intention was for me to be happy in heaven. But, contrary to Mill's natural suggestion, it is not as if God's desire was to maximize happiness. Our happiness is at best a means toward some further goal, the "spreading out" of God's goodness, a goal best accomplished when rational creatures come to understand and love perfect goodness. Yet although God has chosen to share his goodness, he does not aim to maximize even created goodness. Contrary to Leibniz's famous assertion that this is the best of all possible worlds, Aquinas believes that there is no limit to the improvements God might make to the created world: "speaking in absolute terms, for everything made by God, God can make another that is better" (25.6c). Another angel, another human being, another species of finch – all of this would add

to the goodness of creation. As Norman Kretzmann has remarked, for Aquinas “there is no room for a concept as simple, or simpleminded, as the familiar notion of the best of all possible worlds” (1991, p. 231). But God doesn’t have to face the potentially agonizing problem of *How good is good enough?*, because thanks to his existence the universe is already as perfect as it could possibly be. When ‘world’ is taken to include everything in it, created and eternal, it becomes trivially true that this is the best of all possible worlds.

So the question of why God created me can be answered in terms both of why God created individuals of my kind (to fill in the hierarchy of species) and of why God created the individual me (so that another being might come to embrace perfect goodness). Human beings might have been improved in all kinds of ways: not just by becoming more intelligent (§10.4) but also by becoming less riven by temptation (§8.4) and more steadfast in will (§8.3). (Some such changes might amount to creating a new species rather than improving the present one.) There is nothing special about my species, let alone about me as an individual, that explains why God created it rather than something else (or nothing else). God’s choice to create was utterly free, because the universe would have been just as good without me and without my species. From Aquinas’s grand metaphysical perspective, the universe suffers nothing if the human species annihilates itself, or if human beings reject God entirely as so much worthless superstition. Because God exists, necessarily, the universe is perfect, necessarily.

In this light, we should wonder about the classic problem of evil. In its broadest outlines, the argument runs as follows:

1. There is evil (of a certain sort) in the world.
2. God would not permit (such) evil.
- ∴ 3. God does not exist.

When carefully formulated, the weight of the argument is generally supposed to fall on the truth of the first premise (see Tooley 1991). But we can now see a sense in which one might challenge the second premise, and insist that no matter what the evil, God might not have reason to prevent its occurrence. Of course, this is not to say that God might just as well have *created* evil rather than goodness. It is not consistent with God’s goodness for him to create anything evil. But the mere occurrence of evil, as a foreseeable and avoidable consequence of good, is not inconsistent with God’s goodness. For when we view the universe from Aquinas’s perspective, we can say that the evil around us, awful as it seems to us, is so trivial in the grand scheme of things as *literally* to count for nothing. From this quintessentially medieval perspective, God’s goodness so fills the world that there is no ground to complain over our miserable state.

Still, I am embellishing the point in a way Aquinas would not. Our welfare does not matter to the overall goodness of the universe, but this does not mean God does not care about us. It is indeed the central feature

of God's relationship to us that he does care: he loves us and takes joy in us, he is provident and merciful toward us. Aquinas sometimes recognizes that there is a potential problem of evil, and he tries (in predictable ways) to show how various kinds of evil can in the long run contribute to our well-being (see, e.g., *SCG* III.71). But Aquinas does not take the modern view that God's goodness obliges him to save us from pointless evil. It is, on the contrary, a wondrous and surprising thing that God cares at all, that in his infinite wisdom and goodness he even bothers to create and look after beings that are merely finite. Commenting on Psalm 8,4/5 – *What is man, that thou art mindful of him?* – Aquinas remarks:

It is as if an artist were to make great things, and then among them make the very slightest of things, such as a needle. By making the needle, he showed that he knew about it. But if in planning for his works he *cared* about that needle, this would be utterly astonishing (*InPs* 8.4).

When taken seriously, the presence of an infinite being in the universe changes everything. The moral center of the universe tilts away from us, and modern humanism looks as provincial as Ptolemaic astronomy. The effect is to leave us feeling grateful for whatever attention God bestows, rather than resentful or doubting because he has not done more.

Notes

Introduction

- 1 It is only in this sense that Aquinas accepts Aristotle's assertion that in natural beings the formal and final causes are identical. See *Metaphysics* VIII 4, 1044b1 (vs. *InMet* VIII.4.1737); *Physics* II 7, 198a25–27 and II 8, 199a31 (vs. *InPh* II.11.242 and II.13.260).
Modern scholars often take Aristotle to be committed to a stronger identity of formal and final causes – e.g., Irwin (1988), p. 290: “. . . the soul is essentially the final cause of the body; we have no more fundamental account of the soul's nature than this.” (See also Witt 1989, pp. 82–83.) As we will see in §In5, Aquinas thinks there are grounds for a more fundamental account, inasmuch as he identifies happiness as the final cause of human life. (Irwin, for his part, would presumably be unimpressed with that sort of move, because he reads Aristotle as deriving his ethical account from facts about human nature (see Irwin 1988, p. 346). Aquinas would agree in part, but insist that a full account of human flourishing requires further theological assumptions.)
- For a useful survey of *natura* in Aquinas, see the entry in Schütz (1895) – plagiarized word-for-word by Deferrari and Barry (1948). Aquinas gives the same account, in more or less detail, at 1a 29.1 ad 4, 3a 2.1c; *SCG* IV.35.3729; *InMet* V.5.808; III *SENT* 5.1.2c; *QDUVI* 1c. See also 1a 3.3c. The ultimate source is Aristotle, *Met.* V 4.
- 2 Aquinas sometimes speaks of a thing's *participating* in the nature of its species (see, e.g., *De substantiis* 10.126–50 [105]). At other times he speaks of the thing's nature as the particular inner essence contained within an individual (see, e.g., *De unitate* 5.186–96 [256]). In such cases the nature would be the form, taken without the matter (see, e.g., *InMet* VII.9.1473). For discussion of souls as individuals, see §12.4, where I stress that matter is the principle of individuation for the form, not for the substance as a whole.
- 3 See Kretzmann (1997), ch. 1, for an argument on behalf of *SCG* as Aquinas's central philosophical text. For discussion of the place of *InDA*, and the Aristotelian commentaries in general, see my introduction to Thomas Aquinas (1999). Haldane (1997) makes the provocative claim that “if St. Thomas were alive today he would be an analytic philosopher” (p. 81). Oddly, Haldane doesn't consider whether Aquinas today would be a philosopher at all.
- 4 This would presumably be the conclusion endorsed by Inglis (1998). Readers interested in the historiography of medieval philosophy and theology will want to consult his book. Marenbon (1990) distinguishes modern philosophy from medieval *philosophia*, and remarks that “regarded as disciplines, *philosophia* and modern philosophy bear little resemblance” (p. 273). He makes the interesting point that medieval *philosophi*, though officially committed to inquiry through natural reason, in fact devoted the preponderance of their efforts to literal commentaries on Aristotle, working “not by reasoning but from authority” (p. 265). Marenbon (1987) aptly remarks that “if the historian of philosophy writes about what medieval scholars considered to be philosophy, he will not produce a history of philosophy in the modern sense” (p. 88).
- 5 It is in this sense that *InDA* is a philosophical work, whereas *ST* is a theological work. Interestingly, Aquinas situates the *De anima* not among Aristotle's core *philosophical* works, but as the first foundational treatise in his series of *biological* treatises (*InDA* I.1.10–23). Of course, this does not imply for Aquinas that the work was scientific rather than philosophical, since he took biology (as we now call it) to be a part of philosophy. In

some respects the *De anima* might even be considered more *theological* than *philosophical* (in the medieval sense). Aquinas says about the *De anima* that “in this work his plan is to present an account of soul in its own right” (*InDA* III.15.205–6) – precisely how we’ve seen him characterize a *theological* inquiry into human nature. He says in this same passage that one needs to turn to works like *De motu animalium* for an account of the role the body plays in human operations – the very sort of inquiry he regards as *philosophical*.

- 6 Aquinas’s actual terminology is confusing. He regards *theologia* and *scientia divina* as pure synonyms (see, e.g., 1.1 arg. 2), the latter being the rough Latinate equivalent of the former. He identifies theology in its philosophical form with metaphysics (see *InDT* 5.4c, drawing on Aristotle, *Met.* VI 1, 1026a10–32), whereas he tends to refer to theology in its elevated form as *sacra doctrina* (see 1a Q1; *SENT* prologue). In fact, he uses *theologia* only a handful of times throughout *ST*, preferring instead to speak of *sacra doctrina*. Given the ambiguity of *theologia*, it is not surprising that Aquinas avoids the word. Indeed, it is not clear just who gave *ST* its conventional title (see Walz 1941). Despite these complications, I continue to use ‘theology’ as shorthand for *sacra doctrina*.

Officially, metaphysics is a part of philosophy, not a part of sacred theology. This is a somewhat awkward fact for my purposes. But not so awkward. For it is the part of philosophy that comes closest to the interests of theology: indeed, it warrants the name ‘theology,’ though it is not the sort of theology that Aquinas practices. It is not surprising that all of the most interesting medieval metaphysics – in Aquinas, Scotus, and Ockham – occurs in works of theology.

- 7 See Dales (1995), p. 4: “. . . the aims, procedures, and authorities of the artists and theologians were quite different. The primary task of the artist was . . . to solve the question by acceptable philosophical means: that is, by reason and experience. Theologians, on the other hand, had the task of determining the truth of any proposition on the basis of Scripture and the Fathers, aided as far as possible by the resources of philosophy.” If this were right then it would be very difficult to explain why philosophers (now) find theology (then) so much more interesting than philosophy (then).

Cf. the very different claims in Kretzmann (1997): “In my view a great deal – not all – of theology’s traditional subject-matter is really continuous with philosophy’s subject-matter and ought to be integrated with it in practice” (p. 1); “Theology and philosophy really are traditionally indistinguishable, broadly speaking” (p. 23). I am inclined to disagree with Kretzmann only insofar as he thinks *SCG* has a special claim as a more philosophical treatise than *ST*.

- 8 Cf. 2a2ae 5.3c: “If someone has in mind a conclusion without any grasp of how it was demonstrated, it is clear that he does not have knowledge [*scientiam*], but only opinion.” One has to be cautious in translating *scientia* as *knowledge*. *Scientia* often means demonstrative knowledge (see MacDonald 1993). But here it is clear that mere true belief without a grasp of the reason why cannot count as knowledge even in a weak sense. It is merely an opinion. So too, in the main text, a student who merely has the right answer lacks not only knowledge (*scientia*) but also understanding (*intellectus*).
- 9 See also *InPA* II.8.27–43 [§481]; *InMet* V.3.782; *InPh* II.5.186, 1a2ae 5.2 ad 1 and 1.2c: “the first among all causes is the final cause.” For discussion, see Wieland (1975), pp. 148–49. Aquinas’s source for much of this is Avicenna, *Metaphysics* VI.5, who describes the final cause as “the cause of other causes.” For a more general discussion of medieval theories of final causality, see Pasnau (2001). The picture of Aquinas’s doing theology from the top down owes much to Kretzmann (1997), ch. 1.

Chapter 1. Body and soul

- 1 This last claim gets extended discussion in *InMet* I.1, following Aristotle’s claim that “everyone supposes that wisdom, as it is called, deals with first causes and principles” (981b29–30).

On the need for the cause to be an *internal* principle, Cajetan suggests that Aquinas signals as much by defining the soul as “the first principle of life *in* things that are alive around us” (75.1.II). This reading seems rather strained, but Cajetan is surely right to

expect some such indication that the principle in question is an internal principle. In general, *principium* is a very broad way of referring to any kind of source for a thing. A principle may be an internal part of a thing, and in this respect the term is more general than *causa* (I *SENT* 29.1.1c), or a principle may be something external (In*Met* V.1.762). God, then, certainly can be spoken of as a principle (33.1c).

- 2 This first article, like much of the Treatise, is closely patterned on the *De anima* – no surprise, since In*DA* and the Treatise were written concurrently (see Torrell 1996, p. 341). Indeed, that commentary may well have begun as a preparatory exercise for writing the Treatise. In 75.1, Aquinas follows Aristotle's lead in taking the ancient materialists as his starting point. In fact, the structure of 75.1 is patterned on the structure of *De an.* I. The first two objections and replies, based respectively on movement and cognition, can be viewed as summary statements of *De an.* I 2, 403b24–404b30, where Aristotle takes up in turn each of these ways of characterizing the soul. The body of the article offers a general reply to the specific theories discussed in the remainder of *De an.* I. The parallels are equally marked in 75.2 (see Chapter 2, note 8). Indeed, given the similarities between the Treatise and the *De anima* (as Aquinas interprets it), there is something absurd about questioning (as many have) whether In*DA* can be taken to reflect Aquinas's own views. (For further discussion of this issue, see my introduction to Thomas Aquinas 1999.)

Aquinas of course diverges from Aristotle in many interesting ways. Whereas Aristotle devotes most of *De anima* to the senses, Aquinas has little to say in that area (see §6.1). Aquinas devotes two whole questions to will and freedom (QQ82–83), topics on which Aristotle is silent (see **Doing away with the will?**, p. 225). A more subtle difference is that, after finishing with his predecessors, Aristotle immediately sets out to show that the soul is the body's substantial form (*De an.* II 1). Aquinas reserves that conclusion for 76.1, and devotes the seven articles of Q75 to various preliminary conclusions.

- 3 This study often looks closely at the way Aquinas characterizes the views of earlier philosophers: Aristotle, of course, here the pre-Socratics, and elsewhere Plato, Augustine, and others. I do not in general concern myself with how well these characterizations – often, in truth, mere caricatures – match the historical reality of those earlier figures. By ignoring such matters, it is easier to focus on the philosophical issues. As Aquinas himself once remarked, “the study of philosophy is not about knowing what individuals thought, but about the way things are” (In*DC* I.2.228).

Hereafter, I assume that this note indemnifies me in this regard.

- 4 Aquinas is following Aristotle's lead here. The quoted passage from In*Met* I.4.74 is his interpretation of Aristotle's remark that most of the ancients postulated material first principles, “their substance enduring but changing in its states” (*Met.* I 3, 983b9–10). Aquinas expands a great deal on Aristotle when he takes this phrase as providing one of four arguments in favor of identifying the basic principles of things as *material* principles. He takes the other three arguments to be based on further criteria for being a basic principle: (i) a basic principle is what a thing is made up of; (ii) a basic principle is that from which a thing is generated; (iii) a basic principle is that to which a thing eventually gets reduced. In all three cases we can think of the relationship of a knife to iron: the knife is made up of iron, was generated from iron, and will be melted down back into iron. A fuller evaluation of the ancient position would explore these arguments in detail, although I think the criterion considered in the main text provides the most general and compelling rationale for the ancient view. For what Aquinas takes to be a closely related line of argument, see *Met.* VII 3, 1029a10–20, analyzed at In*Met* VII.2.1281–83.
- 5 Here is how the argument runs, step-by-step.

1. Not every body is living, or a principle of life (= ii).
- ∴ 2. To be a principle of life, or to be living, does not hold of a body as the result of its being a body (= i).
- ∴ 3. A body is living, or is a principle of life, through its being *such* a body (= iii).
4. A body is actually such due to a principle that is called its *actuality* (= iv).
- ∴ 5. The soul, which is the first principle of life, is not a body, but the actuality of a body (= v).

- 6 Confusingly, Aquinas uses *corpus* (body) in two different ways – a fact that he is well aware of and regards as merely a terminological problem (see *De ente* 2.26–84 [6–7], *InMet* VII.12.1547, *InDa* II.1.223–235). Sometimes he treats the body as the whole material substance of which the actualities are parts. Other times, the body is contrasted with its actuality, so that bodies are one thing (mere undefined three-dimensional stuff), their actualities another. The first usage explains why we sometimes speak of a body as having soul, and why we can treat *body* as a genus divisible into the living and the nonliving. The second usage explains why we sometimes think of body and soul as two component parts that come together to make up a living being. Later in the *Treatise*, Aquinas explicitly speaks in the first way: “it is clear that soul itself is included in that of which it is said to be the actuality” (76.4 ad 1). But the argument of 75.1 can be understood in either way. He can be taken as meaning either that an actuality is not a whole body, but simply a part of a body, or that actualities are excluded from body. Cajetan understands 75.1 in the second way:

In the title, ‘body’ is taken as distinguished against actuality, in such a way that it makes no difference to the thesis whether ‘body’ signifies a simple or a composite substance, since in either way it is distinguished against actuality (75.1.1).

Strictly speaking, every body must have some actuality, even on the second usage, since to be extended is itself a kind of actuality. Aquinas sometimes speaks in this connection of a *forma corporeitatis*, e.g.: “the first form that is received in matter is corporeality, of which it is never stripped” (*I SENT* 8.5.2c). Here in 75.1c, the idea seems to be that body can be distinguished from all actuality subsequent to this first form.

Stump (1995) expresses puzzlement over why Aquinas describes human beings as a composite of body and soul rather than matter and soul (p. 512). Van Steenberghe (1980) goes even farther, holding that Aquinas is unfortunately swayed by dualism when he characterizes the human soul as the form of the body. “It is not to the body but to prime matter that the soul is united as substantial form. . . . Thomists should, therefore, strive to correct these dualistic expressions in the writings of the Angelic Doctor” (pp. 73–74). I myself am not immune to the urge to revise Aquinas in light of what he should have said. But here I think we should leave well enough alone. It is true that the soul, like any substantial form, gives existence to the whole substance, including all its accidental forms (§3.2). No part of a human being exists independently of, or prior to, the rational soul (§4.3). This is why Aquinas sometimes stresses that the soul actualizes prime matter rather than “an already actually preexisting substance” (*InDa* II.1.250–51). But it doesn’t follow that a human being should be described as the composite of soul and prime matter: this would suggest that all the various actualities of an individual are contained within the soul. I am more than a composite of soul plus prime matter, in that I also contain accidental forms, such as my hair color. Though such forms may supervene on my essence (§5.5), they are not part of that essence.

- 7 Scotus may have held this view in its extended form. He argues, for instance, that fire is only contingently hot – e.g., at *Lectura* I.3.1.3 n.201.

For a reading of 75.1 like the one I am describing, see Kretzmann (1993): “. . . *no* body considered just as a body has life *essentially*. But a *first intrinsic principle* of life . . . must have life essentially. If it did not, its having life would be explained on the basis of something else intrinsic to that living body . . .” (p. 130, original emphasis).

This reading suggests the position of recent functionalists in the philosophy of mind who claim that reductive materialist accounts fail because of multiple-realizability: the possibility that mental states like pain might be realized in entities with bodies entirely different from our own. The problem for the ancients, then, would be that even if they were in fact right about what the soul is, they would have arrived at merely the *contingent* truth about what souls are in this world. Souls might have been realized otherwise; hence their account hasn’t reached the most fundamental level of what it is to be a soul.

- 8 But sometimes it’s not even clear what is wrong with the way the ancients describe their accounts. Consider Democritus, who held that the soul is “a kind of fire and heat” (*De an.* I 2, 404a1). Aquinas, describing this view, says that Democritus “claimed that every-

thing in the natural world is sensible and corporeal” (*InDa* I.3.71–72; see 84.2c). But why accept this characterization? Fire, after all, is not a body *simpliciter*, but a body of a certain kind – a body actualized in a certain way. And heat, according to 75.1c, is not a body at all. So even if Democritus doesn’t explicitly talk about actuality as such, his account does seem to presuppose it.

Chapter 2. The immateriality of soul

- 1 Cajetan (75.4.V) raises a version of the first difficulty stated above by asking why Aquinas fails to mention the nutritive soul. It doesn’t seem that the solution I propose here solves that objection. For although I could be a human being and be incapable of reproduction or locomotion, it is hard to see how I could count as human if I were incapable of taking nourishment, or incapable of growth and decay. If I lacked these capacities then I would surely not be a member of the human species. Cajetan, however, seems to accept my friendly amendment to Aquinas’s account. He then argues that being intellectual is the *only* capacity that human nature requires, and that the senses (and hence the body) are required only to the extent that they are needed by intellect (75.4.VI). So on his view the operations of the nutritive soul are not essential to being human.

I do think we are entitled to infer from this article that the operations of the nutritive soul are not essential to being human. And as further evidence that this is Aquinas’s view, there is his discussion of human beings in their resurrected state, when they will not eat and drink (*SCG* IV.83) nor undergo bodily corruption (*SCG* IV.82, IV.85). But I am doubtful about Cajetan’s claim that the senses are required only for intellectual activity. It seems to me that the sensory powers – cognitive and appetitive – are an essential part of being human, and not just because they are essential to the intellect’s normal operation.

- 2 Readers unpersuaded of this should see Geach (1969), pp. 17–29, who offers an extended argument for sensation and emotion as essential human activities.

Plato seems to propose, early in the *Phaedo*, not only that we could survive without the senses, but that we would be better off without them, more able to “attain truth and clear thinking” (66a). Because Aquinas’s information on the *Phaedo* came second-hand, largely through Nemesius (see **Platonism**, p. 78), he doesn’t realize that Plato would have been prepared to make such an argument. Instead, Aquinas supposes that Plato would have denied that sensation involves the body (75.4c).

- 3 Aquinas thinks it obvious that the soul is subject to accidents. All thoughts, sensations, volitions, and passions are accidents that inhere in the soul. See, e.g., I *SENT* 8.5.2 ad 4, *InJoh* I.1.28. So if the soul is subsistent, then it obviously is a substance.

Aquinas allows that something might conceivably meet only the first condition, and so (strictly speaking) be subsistent without being a substance (*QDP* 9.1 ad 4). Such a thing would be subsistent without having any accidental properties. This is part of the reason why God does not count as a substance (see *SCG* I.25).

- 4 See I *SENT* 23.1.1c: “To subsist implies a determinate mode of existing: namely, inasmuch as something is a being on its own, not in something else (as is the case with an accident).” See also *QQ* 9.2.3c. The idea that accidents are defined by having existence in another goes back to *Categories* 2, 1a24: “Of things . . . (b) Some are in a subject but are not said of any subject. (By ‘in a subject’ I mean what is in something, not as a part, and cannot exist separately from what it is in.)” On substance, see *Cat.* 5, 2a12–15.

- 5 Summarizing elsewhere, Aquinas writes, “It is distinctive of an accident to be in a subject, and distinctive of a substance not to be in a subject. Substantial forms are in matter, but not in a subject” (*De mixtione* 78–81 [434]). Here there are two classes of things that have existence in others and hence are not subsistent: accidents and substantial forms that depend on matter. (It goes without saying that prime matter is not subsistent; see §1.4.) It is crucial to keep in mind, then, that a substantial form is ordinarily not itself a substance. A substantial form is what makes a substance be what it is (see §3.2).

- 6 For the standard substance dualist line, see Hart (1988), ch. 2; Swinburne (1997), ch. 8. The locus classicus is Descartes’s Sixth Meditation, but see Rozemond (1998), pp. 6–8,

who questions the traditional reading of Descartes and notes that he endorses the scholastic definition that a substance is what has existence in its own right.

Aquinas's *De anima* Commentary explicitly makes the connection in the opposite direction, from subsistence to separability: it takes the claim that the soul "has existence and subsistence on its own" (I.2.87-91) to entail Aristotle's claim that "... soul could indeed be separated [from body]" (*De an.* I 1, 403a10-11). (At this point in the *De anima*, Aristotle is simply stating this as the consequent of a conditional claim: if some part of the soul has its own function then the soul can be separated from the body. Later (III 4), Aristotle argues for the antecedent.)

- 7 Hart (1988) supposes that questions about what is possible can be answered through a careful investigation into what is *imaginable*, and he pursues that tactic at length with respect to the mind's disembodied existence. He seems to hold that modal questions of this sort do not rest on facts about what actually is the case. A thing's being a substance, he says, means that "it is not dependent for its existence on the existence of anything else." But then Hart adds: "This is in turn an idea about what is possible, not about what is actually true" (p. 1). If this claim were strictly true it would be fatal to Aquinas's strategy of focusing on what actually is the case instead of what could be the case. But there are several reasons for doubting Hart's claim. First, we ordinarily suppose that questions about *x*'s being independent of *y* are questions about the way things actually are. We might want to test claims of independence by seeing whether such-and-such is possible (e.g., could the intellect keep functioning once the body dies?), but to say that *x* is independent of *y* is not simply to make a claim about what is possible. Second, even if we read claims of independence as modal claims, we would still have reason to focus on what is actually the case. If facts about what is possible are not based on what is actually true, then it is hard to see what they could be based on.

- 8 Aquinas reads the *De anima* as arguing in much this same fashion, and the argument he gives here is closely patterned after Aristotle's: "First, Aristotle shows that the possible intellect is not anything bodily or anything mixed together out of bodily things; second, he shows that it does not have a bodily organ" (*InDA* III.7.93-96).

One might wonder whether any sort of sensory mediation might restrict our intellect in the same way the intellect would be restricted if it actually had a bodily organ – distorting our thoughts in the way that the color of a glass vase distorts our vision. This raises one of the two classic problems of abstraction: the problem of how the senses can deliver information about universals to the intellect (see §10.3). For now, note only that intellect has the benefit of all five senses, as well as the collected memories of past experience. For this reason it is not limited in the way that a single sense is.

- 9 This clause seems intended to block the sort of objection made by Foster (1991). He claims that this argument from 75.2, if sound, would apply just as well to the internal senses, since they too grasp the natures of all bodies (pp. 431-33). But this seems wrong, because even the internal senses are dramatically limited in their scope. The common sense, for example, does grasp all "common or proper accidental sensible qualities," as Aquinas puts it here. But this is a long way from grasping "the natures of all bodies." Only intellect does that.

- 10 Perhaps this way of describing cognition is less peculiar on its face than I suppose. Consider Emily Dickinson:

The brain is wider than the sky,
For, put them side by side,
The one the other will contain
With ease, and you beside.

For other passages where Aquinas explains cognition in terms of existence within the mind, see *InDA* I.4.20-22 and *InMet* VI.4.1234. I discuss this analysis in *Theories*, chs. 1-3. There I argue that Aquinas's notion of intentional existence is quite broad and flexible, too broad to count as a determinate theory, but flexible enough to remain plausible today.

- 11 Aquinas has perhaps committed here what I call the content fallacy, the mistake of making inferences back and forth between what *F* is having a cognition of, and what *F* is actually composed of. See §10.3 and Pasnau (1998).

In 75.5c, Aquinas suggests an alternate argument for the soul's immateriality, based on its capacity for universal cognition. Whereas the material senses are limited to perceiving individuals, the mind has the ability to understand all at once all the individuals within a species, something that requires immateriality. (See also 76.2 ad 3, 84.2c, 86.2 ad 4, *InDA* II.12.71–94, *CT* 18.37, *InDSS* 1.44–58 [2.20].) I don't discuss this argument here, because on its face it seems even less satisfactory than the argument of 75.2c, for reasons I discuss in Pashau (1998). But for a more favorable discussion of this kind of argument, see Nagel (1997), pp. 43–47, who extends Kripke's argument on rule following to a general argument against reductive accounts of mind. Given the unlimited scope of intentionality, Nagel argues that no finite naturalistic account is adequate. Ross (1992), with Aquinas at least implicitly in mind, develops much the same argument in more persuasive detail.

One might propose that the argument of 75.2 just is the argument from universality. After all, Aquinas says here that the object of intellect is the *natures* of bodies; this might be taken to imply that the intellect grasps the universal rather than the particular. But if this were a crucial part of the argument, I think Aquinas surely would have brought out that fact clearly. He fails to do so not just here, but also in the parallel discussion at *InDA* III.7.

- 12 Aquinas recognizes that many animals surpass us with respect to certain senses, but he thinks that our tactile superiority reveals the superior constitution of our body as a whole (see *InDA* II.19.54–114; *De occultis* 202–7 [447]). With respect to our internal senses, we have something that Aquinas calls the cogitative power, which is a kind of subintellect located within the brain, able to perform primitive tasks of reasoning. The animal equivalent is the estimative power, which amounts to little more than instinct (see §§9.1 and 9.2).

Although we now associate with Descartes the view that animals lack full-fledged sensation, others had already made much the same claim. Suárez reports that some of his contemporaries held this view:

They judged that the operations of the senses are not material and neither occur nor exist subjectively in a bodily organ, but rather in the soul itself. From this they inferred that the sensory soul, as such, is subsistent, and so spiritual and immortal, and hence even rational. So rather than grant to animals a rational soul, they denied to them even a sensory soul.

But this view is intolerable, and enormously paradoxical (*De anima* I.v.3).

Suárez goes on to give a detailed and devastating critique of the conclusion that animals lack sensation.

- 13 By the sensory part of the human soul, Aquinas just means the sensory powers within the human soul. On the soul's parts as powers, see §5.1. The claim that only certain parts of the human soul are subsistent presents difficulties for Aquinas's account of human immortality. For discussion, see §12.3.
- 14 The most thorough discussion of these issues is in Hoffman (1990), who rejects my view. On more or less the same side as Hoffman are Casey (1992); Deely (1968); Haldane (1983); Hayen (1954), pp. 114–20; and Sorabji (1991), pp. 242–44. Themistius remarks in his *De anima* commentary (at 424a23–24) that “matter is without understanding, judgment, and perception.” On my side, in taking Aquinas's theory of sensation to be wholly bodily, are Adler (1968); Cohen (1982); Tweedale (1992); and Kenny (1993), pp. 34, 107. Kretzmann and Stump (1998) claim that “neither plants nor nonhuman animals are in any respect spiritual” (p. 335), but they do not say whether they would extend that claim to human sensory processes.

There are large questions about what “our modern sense” of ‘wholly physical’ is, but I am putting these aside for present purposes.

- 15 There is disagreement even on these points, and readers not convinced by these brief remarks should see *Theories*, ch. 1, where I discuss spiritual existence and alteration at length. On the account I offer there, for some quality *x* to exist in *F* spiritually (or immaterially or intentionally) is for *F* to take on the form of *x* without actually becoming *x*-like (e.g., to take on the form of yellow without actually turning yellow in color). For an interesting and detailed investigation into the historical background of *esse spiritualis*, see Tellkamp (1999), pp. 56–129.

- 16 Published translations bring this out even more starkly: Shapcote: "... accompanied with change in the body." Suttor: "... along with a certain physical change in the body." Regan: "bodily changes evidently accompany sense perceptions. ..." Anderson is more cautious and less literal: "... involve some change in the body."
- 17 See *Theories*, ch. 4, for a discussion of whether sensation is in fact an activity, or should be viewed as entirely passive. What one cannot maintain, these remarks show, is that sensation has both an active and a passive component. Cf. *SCG* II.57.1334: "If, in sensing, the sensory soul is active and the body passive, then the soul will have one operation and the body another. Therefore the sensory soul will have some operation of its own, and therefore it will have subsistence of its own. ..."
- In following chapters (esp. §§6.4, 8.4, 9.1, and 9.3) we will see how the soul's various powers, especially the sensory powers, regularly work in tandem to produce unified actions. In such cases, sensation is more like many men pulling a boat. But the point here is that the operation of a single faculty should not be thought to consist of one contribution coming from body, another from soul.
- 18 The range is not quite as wide as it might seem, because Aristotle speaks of a difference in being in many other passages as well (see, e.g., 416b12, 425b27, 426a16), giving Aquinas some sense of how this phrase should be understood. His interpretation remains plausible today: see, e.g., Hamlyn in Aristotle (1968), pp. 113–14.
- Confusingly, Aquinas himself regularly says that form and matter have one being (*unum esse*); see, e.g., *SCG* II.68.1454; *InDA* III.7.290–305. He uses this expression not to indicate that they are conceptually the same, which of course they are not, but to indicate that they have the substantial unity that characterizes matter and form (see §3.2).
- 19 Aquinas indicates in the above passage that the full list is somewhat longer; at *SCG* II.68.1455 he includes refined and dense, heavy and light. On Aquinas's theory of the elemental qualities, see Wallace (1976), pp. 100–101.
- 20 Code (1991) analogously concludes that for Aristotle the soul is a "primitive causal power." After arguing that (a) all sublunary bodies are composed of the four basic elements, and (b) these four elements cannot account for many of the operations required for life, Code concludes that (c) the soul "is a basic causal principle, and its causal efficacy cannot be derivative from the causal powers of elemental matter" (p. 111). Code would extend this conclusion beyond the soul to the forms of all mixed natural bodies.
- 21 The words 'still corporeal' (*corporali tamen*) are a textual variant found in some manuscripts but not included in the Leonine text, which simply omits the two words.
- 22 Of course, the influence of the heavens does not stop once a living thing is generated. Nothing grows without sunlight, to take just the most obvious example. And Aquinas thinks that the heavens are essential for all natural change. One particularly clear text in this regard is *QQ* 7.5.1c, where Aquinas argues that the bodies of the damned will never be corrupted, because the movements of the heavens will have stopped, and therefore "no action or passion involving natural change will be able to occur in bodies." (Cf. 1a2ae 109.1c: "However hot fire is, it alters other things only through the motion of the heavenly bodies.") In the *De occultis* passage in the main text, I follow the Marietti edition. The Leonine edition omits, without comment, the phrase *mediorum corporum transcendentis virtutes*. Inspection of one of the manuscripts used in the Leonine edition (Vat. lat. 773) bears out the suspicion that this phrase was omitted by mistake.
- 23 See, e.g., Hoffman (1990), p. 76: "Aquinas, like Descartes, is a subject dualist"; Swinburne (1997), p. 306 n.9: "Aquinas like most other dualists ..."; Stump (1995), p. 520: "It is clear that he [Aquinas] rejects the Cartesian sort of dualism. On the other hand, Aquinas seems clearly in the dualist camp somewhere since he thinks that there is an immaterial and subsistent constituent to the subject of cognitive function."
- 24 So how should we understand the Treatise's opening words: "*considerandum est de homine, qui ex spirituali et corporali substantia componitur*" (75pr)? This description of human nature would have struck Aquinas's contemporaries as a commonplace. Dales (1995) remarks that soul and body "were considered by nearly all authors before Aquinas to be distinct substances" (p. 2). Peter Lombard had written that "God made man from a dual substance, assembling the body from earth, and making the soul out of nothing" (*Sen-*

tences Bk.II d.1). The first Decretal (written in 1215, known by its opening word, *Firmiter*) speaks of “human [nature] . . . made up out of spirit and body.” Aquinas comments on this text in his *Expositio super primam Decretalem*, saying that “a human being is composed of a spiritual and corporeal nature” (1165). In 77.8sc, Aquinas cites Gennadius’s *On Church Dogma* as attributing two substances to a human being, soul and flesh. It would perhaps be wrong, then, to put too much weight on such a formulaic remark.

Still, we should expect to be able to give some account of how Aquinas understood the claim. The conclusions of this chapter do not make it easy to do so. If we consider only complete substances, then a human being is just one substance, part spiritual and part corporeal. That does not seem to be what 75pr says. If we think of substances in Aquinas’s weaker sense, then human beings are composed of one spiritual substance, the rational soul, and myriad corporeal substances (hands, eyes, etc.). That is definitely not what 75pr says. It is not even clear how we can read the passage as referring to soul and body at all. For although the rational soul is a substance (in the weak sense), the body is not a substance at all when taken apart from its form. Apart from its substantial form, the body would not even exist, let alone be subsistent. (See *SCG* II.69.1461: “Body and the soul are not two actually existent substances; rather, one actually existent substance is made from them. For the human body does not actually exist when the soul is present the same as when it is absent. Instead, the soul makes it actually exist.”)

Davies (1992) seems aware of at least some of these difficulties, and so he offers this adventuresome translation: “. . . a compound whose substance is both spiritual and corporeal” (p. 209). But this isn’t accurate, because it leaves out the idea that a human being is “composed” of two things, apparently two substances.

It seems that there is only one way to think of human beings as containing two substances, one spiritual and one corporeal. We have to identify the spiritual substance as the rational soul, and the corporeal substance as the whole human being, body and soul. It is certainly odd to say that human beings are *composed* of these two substances, since human beings are in fact identical with the latter of the two. But, as I argue throughout Part I of this study, we should not in general take at face value Aquinas’s pronouncements about the way substances are composites of form and matter.

- 25 I had initially assumed that Cartesian dualism could be ruled out straightaway by stressing Aquinas’s commitment to myriad incomplete substances within the complete substance that is a human being. But Descartes’s Fourth Set of Replies puts this assumption in doubt:

Thus a hand is an incomplete substance when it is referred to the whole body of which it is a part; but it is a complete substance when it is considered on its own. And in just the same way the mind and the body are incomplete substances when they are referred to a human being which together they make up. But if they are considered on their own, they are complete (AT VII, 222).

In claiming that a hand too is a substance, in just the way that the mind is, and that it is the whole human being that is a complete substance (cf. AT VII, 228), Descartes raises questions about his own commitment to substance dualism as commonly understood. Indeed, here Descartes looks very much like a latter-day Thomist, albeit one with an idiosyncratic argument for the mind’s subsistence.

So perhaps the real question is whether Aquinas is committed to anything like Descartes’s dualism regarding kinds of stuff. (I speak of “stuff” only for lack of a better word.) But it is not clear whether this would mark a commitment to substance dualism, as opposed to, say, property dualism. Swinburne takes Aquinas’s account in the latter way: he reasons that since Aquinas’s soul is a form without any sort of matter, not even spiritual matter, it must be some kind of property. “The human soul . . . is a form, and so a property” (Swinburne 1997, p. 331). Putting it this way neatly fits with the contemporary debate, but it does not match Aquinas’s terminology very well, nor the underlying metaphysics as I am interpreting it. Consequently, I don’t put any weight on the conventional distinction between substance and property dualism.

- 26 Misconceptions on this score contribute to the view that Aquinas holds a nonphysicalist theory of sensation. From the view that the intellect has some special spiritual nature, it

is a short step to supposing that the senses must be spiritual or immaterial in that same way, whatever that is. Once we see that the intellect's spirituality is entirely a question of its having an operation that is independent of matter, we can ask that same question of the senses. In part the answer is Yes, because the senses transcend the capacity of earthly matter (§2.3). But the senses do not entirely transcend matter. "Among soul's functions, only intellectually cognizing is carried out without a corporeal organ" (75.3c). Other forms "considered in their own right have neither existence nor operation apart from their association with matter, and for this reason they are said to be immersed in matter" (*De unitate* 3.392–95 [234]). The senses are, of course, actual. But they are not so actual as to transcend matter, and in this respect they are unlike the human intellect, and very much like the rest of the physical world.

- 27 See, for instance, the conclusion of Abel (1996), p. 234: "the plausibility of Aquinas's theory is lessened by the fact that it requires apparently ad hoc modifications of both Aristotle's and his own metaphysics." Van Steenberghen (1980) is far more sanguine, but he too remarks of the rational soul's special status that "one could get the impression that it was only a case of special pleading" (p. 72). Aquinas was well aware of the difficulty. The first of his disputed questions on the soul, debated not long before he wrote the Treatise, is dedicated to precisely this question: "Can the human soul be a form *and* an independent thing?" For the background and context of this discussion, see Bazán (1997).

It is particularly misleading to suggest that this theory is just an unhappy marriage of Christianity and Aristotelianism. There is nothing specifically Christian about the thesis that the soul survives death – we might just as well refer to this as a Platonic thesis. And it is no departure from Aristotle to treat the intellect as separable from the body, since Aristotle is quite explicit, on many occasions and to the considerable embarrassment of many Aristotle scholars (e.g., Wilkes 1992, pp. 125–27), that the intellect can exist independently of the body (see *De an.* III 5, of course, but also I 1, 403a8; I 4, 408b19; II 4, 413b24–27; *Gen. An.* II 3, 736b28; *Met.* VI 1, 1026a5).

Chapter 3. The unity of body and soul

- 1 For Pseudo-Dionysius, see *De div. nom.* XIII.2, cited at 1a2ae 17.4c. On mere assembly as insufficient for real unity, see *SCG* I.18.141, 1a2ae 17.4c, *InMet* VIII.3.1725; on ordered assembly, see 76.8c, *SCG* IV.35.3731.

With respect to ordered assembly, and specifically the case of a house, it is interesting that Aquinas repeatedly says something quite different in his Aristotelian commentaries. See, in particular, *InMet* VII.17.1672–74, where a house is claimed to be *unum simpliciter*. (See also *InNE* I.1.78–95 [5].) In these passages Aquinas seems to be adapting himself to Aristotle's way of speaking; as we will see in §3.2, Aquinas standardly denies that artifacts can be *unum simpliciter*.

Aristotle, in contrast, is not concerned (or merely not so careful?) to distinguish artifacts from (what Aquinas would regard as) genuine substances. Indeed, Ackrill (1972–73) seems to think that Aristotle's account holds together only in the case of certain artifacts (pp. 132–33). Furth (1978), on the other hand, remarks that "it is both unfortunate and puzzling that Aristotle's *Metaphysics* discussions of material substance are oriented so obsessively around artefactual study objects" (p. 646). In his later book, Furth comes to a reading of Aristotle much like the reading I propose for Aquinas (§§3.2 and 3.3), concluding that for Aristotle living things are the only full-fledged substances (1988, pp. 181–84). But Furth suggests that Aristotle's notion of substance admits of degrees. This is not a suggestion I embrace for Aquinas.

- 2 See 1a2ae 17.4c, *InMet* X.1.1931. We saw in §2.2 that a complete substance is that which is the member of a species (75.2 ad 1). The link between being *unum simpliciter* and being a substance becomes more clear in §3.2. For further discussion of the relationship between being and being one (*ens* and *unum*), see Aertsen (1996), ch. 5. One remote source for Aquinas's view is Boethius's claim that "everything that exists, insofar as it exists, is one" (3a 17.1sc, referring to *Contra Eutychen*, ch. 4, p. 94).

- 3 Aquinas is committed to the view that all artifacts are nonsubstances with respect to their form. (See, e.g., *InDA* II.1.157–58, as quoted in main text, and also *QQ* 11.6 ad 3, *De principiis* 1.74–81 [342].) So we might try defining an artifact as a substance (or substances) that has been purposefully altered by a change to one or more of that substance's accidental forms. Or, if 'purposefully' seems too broad in light of Aquinas's across-the-board teleology (see §§6.2 and 7.1), we might instead require that the alteration come from an external principle (following *InMet* IX.6.1837). See §4.1 for how *natural* generation requires an *internal* principle.

One might suppose that simply being man-made is at least a sufficient condition for being an artifact. (Cf. the definition proposed by Wuellner 1966: "an object, or an order among objects, made by human art or transitive work.") But it seems that Aquinas should not accept this, because (for reasons that will become clear) his account of substance leaves open the possibility that human beings might make substances – that is, might bring into existence a new substantial form. Cloning might be an example of this. An even clearer example would be our constructing from scratch a new living organism. What is known as the Minimal Genome Project is presently attempting to determine the minimal configuration of genes required for a living substance, "an advance that could ultimately allow scientists to design and create living organisms completely from scratch" (*Washington Post*, Dec. 10, 1999, A8).

But if we can make substances, then Aquinas might want to reconsider his claim that artifacts as such are not substances. For he might want to agree that being man-made is a sufficient condition for being an artifact. In that case he might have to concede that their nonsubstantiality was a contingent feature of the state of technology in the thirteenth century.

- 4 See *InDA* II.2.32–36: "an accidental form, which is not in the genus of substance, does not pertain to the essence or quiddity of its subject. . . . But a substantial form does belong to the essence or quiddity of its subject." This line of thought would quickly lead to the problematic sort of Aristotelian essentialism that Quine (1963) characterized as "adopting an invidious attitude toward certain ways of uniquely specifying *x* . . . and favoring other ways . . . as somehow better revealing the 'essence' of the object" (p. 155). See also Cartwright (1968) and Wiggins (1980), pp. 130–31.

Aquinas doesn't regard this as a dead-end project, however, because he believes the essence of a substance is determined by the subject's end, its final cause (see §In.5).

- 5 Wiggins (1980) picks up on the second part of this characterization: "According to whether '*x* is no longer *f*' entails '*x* is no longer,' the concept that the predicate stands for is in my usage a *substance concept*" (p. 64). Also Brody (1975), p. 97: "If, before a change, there was an object *o* with a property *P*, then the change is what we can call an alteration (as against a substantial change) if *o* continues to exist after the change though it no longer possesses *P*. On the other hand, the change is a substantial change if, after its occurrence, *o* no longer exists."

A properly Aristotelian notion of essences imposes a further condition, that the property describe what the thing is, its quiddity.

- 6 One might claim that I have shown only that the bronze is not a substance *qua* lump. True, when the lump breaks apart, the parts remain as they were. But all that shows (one might say) is that *lump* is not a substantial form.

The example shows more than that, as becomes clear once it is set out in a way that makes no assumptions about what the substantial form in question is. Take some mid-sized bronze substance candidate. Now, destroy that substance candidate by freezing and then shattering it, so that what was a mid-sized piece of bronze is now many tiny shards of bronze. It is evident (1) that the substance candidate no longer exists (which would entail the loss of its substantial form); and (2) that the pieces of that substance candidate remain in existence. Therefore, a mid-sized piece of bronze does not meet Aquinas's extended criterion for substancehood.

For an interesting discussion of related issues, see Connell (1988), chs. 9 and 10, who argues from a Thomistic perspective that single atoms and molecules are not substances.

7 Quite aside from the problematic chemical nature of bronze, the example of a statue is more complex than I have indicated, and the interested reader should see the discussions in *QQ* 11.6 ad 3 and IV *SENT* 44.1.1.2 ad 4. In each of these passages, Aquinas explains that artifacts like a statue are substances with respect to their matter, but not with respect to their form. So what happens when a statue is destroyed and then reproduced? According to each passage, the statue does not remain the same relative to its form: this is because numerically the same form cannot be destroyed and then brought back to existence. (Hence personal immortality requires the survival of the soul; see Chapter 12.) But in another sense – relative to its matter – the statue is the same. In fact, Aquinas claims that the statue remains the same substance. So its substantial form must remain the same. But how can this be, given that this collection of bronze stuff has been destroyed? Conceivably, Aquinas assumes that even after the statue is destroyed, the bronze holds together as a clump, and that this (*being a clump?*) is somehow its substantial form. Yet what seems far more plausible, both philosophically and exegetically, is that the individual molecules of bronze are what retain their substantial forms. So when those molecules are brought back together as a statue, there is no substantial change. “When considered as a substance, a statue rebuilt from the same matter is numerically the same” (IV *SENT* 44.1.1.2 ad 4). The substance remains the same, in the sense that the myriad bronze substances that once made up a statue do so again. *Their* forms are never lost.

8 Here I am indebted to Eleonore Stump, who has tried her best to talk me out of this view. In comments on this material for an American Philosophical Association colloquium, Stump has proposed a series of texts that seem problematic. Closest to home, she points out that 76.4 ad 4 speaks of the substantial form of a stone. (An even clearer passage on stone as a substance is *CT* 211.20–29 [410].) But it is not clear that Aquinas always uses the term ‘stone’ (*lapis*) as we do, as referring to rock clumps of a certain smallish size. At least in some contexts, though admittedly not in all, *lapis* might serve as a mass term for Aquinas, like bronze. And if *lapis* can work as a mass term, then to call it a substance shows nothing about how much or little *lapis* might constitute a single substance.

Moreover, if stumped, I have a fallback position, in that I am not really concerned to show that Aquinas *never* speaks of substance in a way that is incompatible with the extended criterion. The term ‘substance’ is a broad one, used in many ways in many contexts, and Aquinas is not always careful to use terms in their strictest technical sense. What I want to insist on is that (1) the account of 76.8 has the implications I have identified; (2) the account is consistent with the general contours of Aquinas’s thinking about artifacts and natural substances; (3) if (and only if) we take this account seriously, we can understand how it is that soul and body are unified; (4) the account yields the further dividend of an interesting and sophisticated ontology.

For background to the following discussion of *minima*, see Emerton (1984), ch. 3, and Pabst (1994), pp. 272–76.

9 Another interesting discussion in this context is 3a 2.1, where Aquinas develops his account of how two natures, one human and one divine, were united in Christ. They could not have been united as one nature, Aquinas argues, because there are only three possible ways for that to occur: (1) as a mere aggregate; (2) as a mixture; (3) as incomplete parts of a form-matter composite. None of these possibilities make sense for the Incarnation. For our purposes, however, what is interesting is that a lump of bronze or a piece of stone can fall only into category (1). Not into (2): Aquinas is explicit here that the parts of a mixture undergo a change in species when they are mixed together. Not into (3), because such parts are incomplete. See also *SCG* IV.35.3731–32, where Aquinas gives much the same taxonomy.

10 The comparison between Aquinas and Leibniz is instructive. Leibniz’s ultimate considered position, as expressed in a letter to de Volder from 1703, is that “there can be nothing real in nature but simple substances and the aggregates that result from them” (Leibniz 1989). But sometimes Leibniz expresses more sympathy for the view that at least some extended things can be substances. He writes to Arnauld (July 14, 1686)

If the body is a substance and not a simple phenomenon like the rainbow, nor an entity united by accident or by aggregation like a heap of stones, it cannot consist of extension, and one must necessarily conceive there something that one calls substantial form, and that corresponds in some way to the soul (Sleigh 1990, p. 103).

Sometimes, in fact, Leibniz seems inclined to hold that the only extended substances are living substances: “perfect unity must be reserved for bodies that are animated, or endowed with primitive entelechies” (*New Essays* 3.6.42; from the French quoted in Wiggins 1980, p. 98). For one effort to sort through Leibniz’s complex and varying positions, see Sleigh (1990), chs. 5 and 6.

- 11 See *InDA* II.4.33–89, re. *De an.* II 2, 413b15–24. Although Aquinas is not considering these as potential counterexamples to the extended criterion, the context in which they arise is intimately related to the concerns of this chapter. Aristotle had presented these cases as evidence for the thesis that the soul exists throughout the body. Correspondingly, Aquinas says that in these cases a part of the soul separates with the bodily part. The cut-off branch or worm part can survive precisely because it takes a part of the soul with it (cf. 76.3c, *InDA* I.14.107–34). These cases are the real-life counterparts to the scenario imagined in §2.4, of a human hand that might exist on its own, separated from the body. Indeed, in these cases the same plant part or worm part continues to exist, because it takes a part of its substantial form with it.
- 12 There is a further question of how the soul can be *whole* in each part. After all, not all of the soul’s capacities are present in each part: we can see, for instance, only through the eyes. Aquinas explicitly addresses this issue in 76.8c, and solves it by invoking his distinction between the soul’s essence and its capacities (see §5.2). The soul’s essence is whole in each part of the body. Its capacities, in contrast, are generally located by the relevant organs. And some capacities are not bodily at all (76.8 ad 4).
- 13 Aristotelian hylomorphism is “the only way that is left” – but at this point I mean it to be an open question as to whether the proper form of hylomorphism embraces a single substantial form (Aquinas’s view) or a plurality of substantial forms (the standard view). This is the topic of §4.4. Either way, the ancient harmony theory is unacceptable because it didn’t recognize harmony as a substantial form at all. If harmony were treated as a substantial form, then it might be something like the scholastic *forma corporeitatis*, which authors like Scotus treated as one among several substantial forms. The present arguments have no bearing on that kind of account.

Chapter 4. When human life begins

- 1 Of course, a special account must be given of the *first* human beings, Adam and Eve, and Aquinas offers a detailed account of the initial creation of the human species in QQ90–102. I put this special case to one side and focus on reproductive generation rather than creation *ex nihilo*. Even ordinary human reproduction is distinctive in that it cannot happen without an act of creation.
- 2 Aquinas goes quite a bit farther when he immediately adds, “This was the one reason why Platonists posited Forms: to be the cause of generation in things. So if separate Forms cannot be the cause of generation, it will be clear that there are no Forms that are substances existing on their own.”

The ultimate basis for supposing that the Forms offer such an account is presumably *Phaedo* 100a–105c. It seems unlikely that Plato thought the Forms were sufficient on their own to account for generation, but Aristotle seems to have supposed as much. He remarks that “the Forms are causes of both being and becoming” (*Met.* I 9, 991b3–4). Aristotle’s criticism was that, even if the Forms exist, still some sort of efficient cause must be provided to explain why a certain particular comes into existence when it does. Aquinas looks to *Met.* VII 7–9 for a detailed refutation of the Platonic theory of generation (*InMet* VII.6–8). Rather than rehearse all the arguments advanced there against Plato, I simply set out the alternative account that Aquinas finds in Aristotle.

- 3 See 118.1c and *QDP* 3.11 ad 5, where in attempting to explain how the semen can preserve the causal force of the father he makes a comparison to the way a projectile, such

as an arrow, conserves the causal efficacy of the force that originally put it into motion. Of course, this analogy has turned out to be based on the wrong physics of motion. In ad 4 he offers a more durable analogy: to the plan of a house in the mind of its builder (see below).

- 4 Albert the Great is the figure most closely associated with the inchoate-form theory: see Nardi (1960) and Snyder (1996).

Another proponent would presumably be Bonaventure (*II Sent.* 7.2.2.1). He invokes Augustine in postulating that matter contains *rationes seminales* (“something co-created in matter, from which the agent, in acting on that matter, brings out the form”). Aquinas denies that Augustine’s *rationes seminales* should be understood as inchoate forms within matter, but he remarks that “some” want to take the theory that way (*QDV* 5.9 ad 8). For discussion of Bonaventure’s views, see Pegis (1934) pp. 44–48. For translation of some key texts, see Wippel and Wolter (1969), pp. 318–26.

Aquinas attributes the hidden-form theory to Anaxagoras (see *II SENT* 1.1.4 ad 4; *InMet* VII.7.1430), presumably on the strength of various remarks in Aristotle (see, esp., *Met.* I 3, 984a12–16, *II* 6, 1063b25–30; *Phys.* III 4, 203a20–33; *De gen.* I 1, 314a8–30). See also Lucretius, *De rerum natura* I.830–920.

- 5 Aquinas deploys the same analogy to explain the causal efficacy of the heavens: they too contain virtually the forms of natural things (*QDP* 3.11 ad 4 and 12), and they act under the direction of separate substances (ad 13). Here is where would-be astrologers should look for some theoretical foundation for their views.

On the disparity between male and female contributions in reproduction, see Furth (1988), pp. 137–41, who makes the plausible suggestion that Aristotle didn’t divide the contributions equally because he couldn’t conceive of any way in which the *virtus formativa* could be a composite from two disparate sources. (Staying with Aquinas’s analogy, this would be like building one house out of two disparate blueprints.)

- 6 Dworkin (1993), p. 13. Dworkin suggests that the abortion debate is motivated not by disagreement over whether embryos are human persons, but by disagreement over the intrinsic value of life. In §4.3 I arrive at a similar diagnosis of what the central moral issue ought to be. But I am doubtful about Dworkin’s contention that this is *in fact* what motivates the political dispute. (For developed criticisms of his view on this score, see Kamm 1995, pp. 167–70.)

Antonin Scalia, dissenting in part in *Planned Parenthood v. Casey*, remarks, “The whole argument of abortion opponents is that what the Court calls the fetus and what others call the unborn child is a human life.”

- 7 Aquinas remarks of abortion before the rational soul is infused that “although this sin is serious, and should be counted as a wrongdoing, and is contrary to nature (since even a beast hopes for its fetus), still it is less than homicide, because conception could still be impeded in some other way” (*IV SENT* d. 31 expositio; see also 2a2ae 64.8 ad 2). It is not clear here, or elsewhere, just *how serious* a sin this is, but Aquinas does go on to say that someone who procures an early-stage abortion has not even incurred the sort of irregularity that impedes receiving holy orders. (In contrast, killing even in self-defense does incur such an irregularity (*IV SENT* 25.2.2.2 ad 3), as does a second marriage (*IV SENT* 27.3.1.1).)

Aquinas never discusses the ethical status of abortion at any length, and so one is left to infer what his exact grounds are for condemning early abortions. Roughly, his objection would stem from the unnaturalness of the act, which in this case can be measured by the way abortion interferes with the natural procreative function of sexuality (see 2a2ae 154.11–12). If this line of thought is to have any force, its talk of “unnaturalness” would ultimately need to be grounded in terms of what is good for human beings. Naturalness, for Aquinas, is not an end in itself – though he is convinced that, for the most part, what is natural is for the best (see §6.2). I do not pursue this issue here. (For an exemplary attempt to provide this kind of grounding in the cases of killing, nonmarital sex, and lying, see Finnis 1998, pp. 140–63.)

- 8 See Kamm (1992) for a detailed philosophical development of Thomson’s argument.

A note on terminology. I do not in general distinguish between 'being human' and 'being a human being,' or between 'a human being' and 'a person.' Below I consider the distinction some draw between human beings and persons. As §4.3 discusses, the adjective 'human' is a slippery one. I use it in the strongest sense, to characterize a thing as a human person. Accordingly, when I ask the question, "When does human life begin?" I mean to ask the question of when a human being begins to exist.

I also do not follow the widespread recent practice of distinguishing the question of whether a fetus is a human being from the question of whether a fetus is a human being *with the right to life*. I ignore these distinctions partly because they do not fit with Aquinas's approach, partly because I want to meet head-on the pro-life intuition that abortion is murder, and partly because I fear that an analysis cast in terms of rights distorts and limits the debate in various ways. Still, those who prefer to see the debate as one over the right to life can take the question of whether the fetus is a human being just to be the question of whether the fetus has the same right to life as a fully developed human being.

- 9 Blackmun in fact remarks that if the fetus is a person then "the appellant's case, of course, collapses" (p. 62). Still, some legal scholars have wanted to resist this conclusion. Tribe (1990), in particular, follows Thomson (1971) in suggesting that the right to abortion could be founded on the absence in American jurisprudence of good samaritan laws.
- 10 Here, as elsewhere, a "respectable interpretation in contemporary terms" does not entail throwing out the notion of soul. For an instance of the difficulties that arise, consider Michael Lockwood's attempt to use brain development as a criterion for being human:

Just as I shall live only as long as the relevant part of my brain remains essentially intact, so I came into existence only when the appropriate part or parts of my brain came into existence . . . (1985, p. 23).

By resting everything on brain development, Lockwood makes it metaphysically impossible for me to survive the destruction of my body. Perhaps in fact I do not survive death. But surely we want to leave open the *possibility* of life after death; we do not want a theory that entails its impossibility. Because Aquinas distinguishes between the soul and the particular bodily instantiation of the soul, he leaves room for the possibility of one's surviving without the other. (See Chapter 12 for the details of Aquinas's account.)

- 11 See, e.g., Heaney (1992), who argues that if Aquinas had had a modern understanding of genetics, he would have been led to postulate the human soul's infusion at conception (pp. 29-31). Similarly, Finnis (1998) remarks that "it seems clear" that, if Aquinas had known just how complex sperm and ovum are, he would have concluded that the rational soul "can be and doubtless is present" from the moment of conception (p. 186 note n). Gerber (1966) makes this argument in detail.
- 12 This is the stance sometimes taken by the Catholic Church. See Sacred Congregation (1974), sec. 13, and, more recently, John Paul II (1995):

Furthermore, what is at stake is so important that, from the standpoint of moral obligation, *the mere probability* that a human person is involved would suffice to justify an absolutely clear prohibition of any intervention aimed at killing a human embryo. *Precisely for this reason*, over and above all scientific debates and those philosophical affirmations to which the Magisterium has not expressly committed itself, the Church has always taught and continues to teach that the result of human procreation, from the first moment of its existence, must be guaranteed that unconditional respect which is morally due to the human being in his or her totality and unity as body and spirit (ch. 3, sec. 60, my emphasis).

For discussion of this approach, see Coughlan (1990), pp. 78-96, and Tauer (1984).

- 13 He does, in his early *Sentences* commentary (III.3.5.2c), repeat Aristotle's tentative claim that the fetus begins to move and is completely formed around the fortieth day, for males, and the ninetieth day, for females (*Hist. An.* VII 4, 583b2-30). But he clearly marks this out as Aristotle's view, and elsewhere he does not bother to speculate.
- 14 Two crucial developments that occur around mid-gestation are the appearance of synapses in the cortex and the connection of the developing cortex to the sensory system, via the thalamus (see Flower 1985). Trevarthen (1987) remarks that "this phase is a crucial first

step in the building of higher psychological functions" (p. 107b). Morowitz and Trefil (1992) argue that the cortex begins functioning between twenty-five and thirty-two weeks of gestation (p. 119). Burgess and Tawia (1996) argue for a time frame of thirty to thirty-five weeks (pp. 21-24), for the onset of consciousness. They remark that twenty weeks "would certainly appear at least to be a lower bound to the possible location of cortical life; it seems to be the most conservative location we could plausibly advocate" (p. 23). For reasons that become clear below, I tend toward this conservative estimate, and use the vague phrase "around mid-gestation."

- 15 "The brain must be in a good state to keep the good condition of the internal sensory capacities, such as imagination, memory, and the cogitative power. For this reason, human beings were made to have the largest brain, among all animals, in proportion to their size" (QDA 8c).

One might wonder: If it is so natural for us to have a body, why do we lose it? This is the effect of original sin. God made Adam and Eve immortal, but by sinning they condemned their descendants to lives that were ignorant, brutish, and short (see **Original Sin**, p. 259). Still, though the wages of sin are death, there is a remedy for death in resurrection. See 12ae 85.5-6, QDA 8c at end, and §12.4.

- 16 One might reasonably wonder what it means for an immaterial mind to be located in a physical object. Aquinas's view is that a purely immaterial being like an angel takes on the location of any body that it acts upon (52.1). By extension, this principle explains why God exists everywhere (8.2).

- 17 Ford's admirable study does not conclude in favor of the moment-of-conception thesis. He makes a compelling argument that an embryo could not possibly count as a human being before it achieves a level of organization that precludes it from dividing into several embryos and precludes several embryos from fusing into one. This occurs only with the formation of the "primitive streak," at around the fourteenth day. In fact, despite the official Church stance, there is a growing consensus among all parties to the dispute that, whatever be said after the first two weeks, it cannot reasonably be supposed that a one-week-old "preembryo" counts as a human being (on this consensus, see Tauer 1997).

Before the primitive streak is formed, the preembryo would not in Aquinas's view even count as a single *substance* (see note 25). Only once the cells take on at least that much unity can the further question arise of what *kind* of substance the embryo is.

- 18 Bernardo Bazán, a leading authority on Aquinas's work on the soul, makes a criticism like that of Ford's. In contrast to his usually unswerving Thomism, Bazán attacks Aquinas for supposing "*sans fondement*" that the rational soul cannot fully exist before the necessary organs develop. "*On peut parfaitement affirmer que l'âme rationnelle existe dans l'embryon et qu'elle n'exerce pas toutes ses opérations, faute d'organes nécessaires . . .*" (1983, p. 392n). Again the problem is a confusion over the appropriate level of potentiality. To have a rational soul requires having the potential in hand for using the mind, rather than having some more remote potential to develop the potential. Bazán goes on to mention the mentally ill, but in such cases there is still some capacity to use the mind. And if that capacity has been *entirely* lost (or never existed), then we should say that the human being has gone out of existence (or never existed). See **Symmetry**, p. 124.

- 19 The Jesuit theologian Joseph Donceel makes this point forcefully in a 1970 article, where he shows how many recent accounts of the soul's infusion, even those offered in Aquinas's name, have been blatantly Cartesian. Donceel remarks, in describing Aquinas's hylomorphism, that "even God cannot put a human soul into a rock, a plant, or a lower animal, any more than He can make the contour of a circle square" (p. 82). See also Kluge (1981), Shannon and Wolter (1990), and Wallace (1994) for similar lines of argument. If these articles were more widely known and appreciated, much of this chapter would be unnecessary.

In view of the attractiveness of Aquinas's proposal, it is not surprising that a number of recent studies have independently converged on much the same account, not always for the same reasons. Most notably, see Morowitz and Trefil (1992) and Boonin (2002).

- 20 For the early Church condemnations, see Denzinger (1967), nn.403 and 456. McTaggart (1916), in a delightful discussion of his idealist metaphysics, expresses puzzlement that

“of the many who regard our life after the death of our bodies as certain or probable, scarcely one regards our life before the birth of those bodies as a possibility which deserves discussion” (71-72). He goes on to remark that “there seems nothing in pre-existence incompatible with any of the dogmas which are generally accepted as fundamental to Christianity” (72-73).

- 21 Trevvarthen (1987) remarks that, after birth, “the number of contact points in the cerebral cortex increases astronomically” (p. 104). “More changes occur in the cellular structure of the cortex in the first six months after birth than at any other time in development” (p. 106). Derbyshire (1999) says that “while there are similarities between the fetal nervous system and the adult, it is important to remember that the real explosion of events in the cortex occurs postnatally between the third and sixth months of life” (p. 21).

- 22 Aquinas of course had virtually no good information on this subject. We have some information, but it is still limited, partly because of our limited understanding of the brain, and partly because of ethical constraints on embryo research. For Aquinas, the problem is uncertainty as opposed to indeterminacy. Because the soul’s infusion is an all-or-nothing event, there is on Aquinas’s account nothing indeterminate or vague about when a human being comes to exist. As a result, at one moment abortion would be merely the destruction of a potential life, whereas at the next it would be murder. This may seem implausible, and it is noteworthy that if we let this talk of infusion drop out of the account and we focus solely on brain development, then we might account for the common intuition that abortions become more and more questionable, gradually, as a pregnancy advances.

As an analogous case, consider the question of when we should first say that a girl becomes a violinist. Clearly, someone who has never touched a violin cannot be a violinist. (Analogously, without a developed brain, the fetus cannot be a rational animal. Also, she can continue to be a violinist after losing her violin, just as the rational soul can continue to exist without its body.) Precisely when does she become a violinist? Is it when she first begins to practice, or when she reaches a certain stage of proficiency? In a sense, clearly, she is no violinist the first time she sets bow to strings, but it is also not clearly appropriate to insist on a certain degree of proficiency. The issue simply seems indeterminate.

Aquinas would not accept this analogy: he denies that the issue is indeterminate in this way. On his view, there is a difference in kind between sensory and intellectual activity, and there is no smooth continuum from one to the other.

Descartes, interestingly, explicitly defends the view that the rational soul begins to think from the moment it is created (e.g., Fifth Set of Replies, pp. 246-47 (AT VII, 356)).

- 23 It is worth noting that what gives human beings a special moral status is not that we have human souls, but that we have a special cognitive capacity. The presence of a certain sort of soul cannot be the ultimate explanation for our moral status, because there is nothing intrinsically special about the human soul, apart from the capacities that it possesses. Even the soul’s incorporeality (§2.2) is valuable only because this is what makes it be intellectual. Aquinas’s ultimate explanation, then, has to appeal to our actual ability right now to use intellect.

Some mental defects will be so severe, then, that the creature is not a human being at all. To take the most clear of cases, hydrocephalic newborns would never have received a rational soul in the first place, since the requisite brain development never occurred. Other cases are less clear, at both birth and death. But however difficult it may be for us to judge these matters, Aquinas’s theory implies that there is a nonvague difference in kind between intellectual and merely sensory beings.

- 24 “He who will be a human being is a human being” (*Apologeticum* IX.8). Church documents constantly appeal to this phrase. Ironically (as Coughlan 1990, p. 93, points out), Tertullian himself held the heretical view that the human soul, rather than being directly created by God, is conveyed from the parents through procreation. (On this as a heretical claim, see Aquinas 118.2c and Denzinger 1967, nn. 360 and 1007.)

Bonaventure makes a telling remark regarding such future potentialities. To an objector who reasons that one has to look at what the fetus will become, he replies:

One does not consider the quantity of the harm with respect to what *can be* the case, but with respect to what *is* the case. For with respect to what can be the case, one human being could over time be the origin of a thousand. Thus he who kills one would kill a thousand, which is false (IV *SENT* d. 31 dub. IV).

Bonaventure concludes that although aborting a prehuman fetus is a grievous sin, it is not murder.

- 25 The claim that an embryo is an independent substance can be understood in terms of the analysis offered in §§3.2 and 3.3. If a fetus could be kept alive outside of the womb, it would remain just the substance it was inside the womb. In this sense, its existence does not depend on the substantial form of the mother. What is at issue is not actual viability, but mere theoretical viability; recall from §2.4 the case of the human hand. The hand, however, is an incomplete substance, on the terminology introduced in §2.2, whereas the embryo is a complete substance.

There is a further question of whether the fertilized egg has the requisite unity, from the start, to be a substance. It seems clear that it does not. At its very early four-cell stage, for instance, each of the four cells, if split from the others, could independently develop into a normal embryo. This violates the criterion of §3.2. At the eight-cell stage, however, specialization already sets in, and not just any cell could split off and develop into an independent embryo. Yet even here, fission and fusion remain possible, and such processes would seem to violate Aquinas's criterion for substancehood. (See note 17 on the development of the primitive streak. For some of the relevant science, see Wolpert 1991, p. 35. On the metaphysics, compare van Inwagen 1990, sec. 14, esp. pp. 151–54.)

- 26 Aquinas regularly invokes this rigidity doctrine in support of his account of human generation (see 118.2 ad 2, *CT* 92.172, *QDSC* 3 ad 13). The source is Aristotle, *Categories* 5, 3b32–4a9. The essentiality doctrine likewise goes back to Aristotle: see *Topics* IV 5, 125b37–39, quoted in §12.4.

Aquinas's account of a rapid change from one substantial form to the next represents a point of conflict between him and his teacher, Albert the Great. Albert believed that the human soul is infused and then gradually perfected, without rapid substantial changes from one form to the next. See Weisheipl (1980), pp. 457–60, and, more generally, Demaitre and Travill (1980).

- 27 For an example of someone pushing too hard on the nonhuman status of an early embryo, see Lockwood (1985), who remarks that “unless the interests of some other being are affected thereby, it is morally permissible to do whatever one likes with a human embryo or foetus before brain development” (p. 24). Such a claim is wildly out of step with our usual moral intuitions, and it in no way follows from taking sufficient brain development as the criterion for being human.
- 28 *II Sent.* Q71 (II 637); see Pasnau (1997b). For critics, see, among many others, Pecham, *Quodlibet* 4.25; William de la Mare, *Correctivum fratris Thomae* I.xxxi; Matthew of Aquasparta, *De incarnatione* Q9, pp. 180–82; Richard of Middleton in Zavalloni (1951). Some of these figures are discussed in Pegis (1934), pp. 53–76. For a careful discussion of Aquinas, Henry of Ghent, and Scotus on this issue, see Cross (1998), ch. 4. There was disagreement among these different authors over just how many and which substantial forms should be postulated. But they all agreed that *one* was the wrong answer.

Aquinas did have some supporters: see Giles of Lessines, *De unitate formae*, and, more generally, Roensch (1964), chs. 5 and 6.

Aquinas's originality is assessed in detail by Zavalloni (1951). He concludes, “*les scolastiques prèthomistes sont tous des pluralistes, mais ce sont des pluralistes inconscients*” (p. 368). Dales (1995) reaches much the same conclusion:

with regard to the unity (or plurality) of substantial form, one should realize that the question does not seem to have been considered central before Aquinas. All authors subscribed to some version of what, in retrospect, we may designate as a theory of plurality of substantial form, at least if one considers a compound form, even though unified, to be ‘plural’ (p. 2).

- 29 Prümmer and Laurent (n.d.), p. 374. Is this account, by Bartholomew of Capua, a fair one? It is admittedly second-hand, based on “a number of trustworthy Dominican brothers.” Moreover, it comes to us by way of the records of a 1319 hearing into Aquinas's can-

onization. Pecham, for his part, denied having attacked Aquinas in this way (see Weisheipl 1974, pp. 255–56). But it is clear that Pecham was greatly exercised by this issue. In 1284, as archbishop of Canterbury, he explicitly condemned the doctrine, reinforcing a condemnation promulgated in 1277 by then-archbishop Robert Kilwardby (see Dales 1995, p. 127; Weisheipl 1974, p. 337).

- 30 Plato speaks of a person's having multiple souls at *Timaeus* 69c–72d. (The more famous discussion of *Republic* IV, 436–41, distinguishes three *parts* of the soul.) Aquinas's source on Plato was presumably Averroes, *De anima* I 90 (p. 121). Avicenna also discusses, and then rejects, the doctrine of multiple souls (*Liber de anima* V.7).

On the scholastic consensus, see Zavalloni (1951), p. 385. It's telling that William de la Mare characterizes 76.3 as arguing “that in a human being there is only one substantial form . . .” (*Correctivum fratris Thomae* I.xxxi, p. 127). He fails to notice that the Treatise doesn't even introduce the notion of substantial form until 76.4. A little later de la Mare – always reluctant to allow that Aquinas gets anything right – allows that “many concede” there is only one soul in a human being, and he adds that “this is not now in question” (p. 132).

Excursus metaphysicus

- 1 Solmsen (1958) aptly remarks, regarding Aristotle: “Yet it would surely be a gross mistake to assume that what is not for Aristotle ‘actual being’ can have no place in his system. To do so would be tantamount to ignoring his fundamental differentiation” (p. 244). I don't mean to commit this sort of gross mistake, because I am not denying that prime matter has a place in Aquinas's system.

It is interesting, in this context, to read Cross's careful analysis of Scotus on prime matter: “Scotus's worry is that Aquinas's account simply *reduces* matter to form: that is, that Aquinas's talk of matter ultimately says nothing which cannot be captured equivalently by some of the ways we talk about form” (1998, p. 18). That seems exactly right, and nothing at all to worry about.

My account has some affinities with Carlo (1966), but his peculiar form of existential Thomism leads him to reduce prime matter to a kind of limited existence. So although we see much the same problem with prime matter, we arrive at very different views.

- 2 See, e.g., Adams (1987): her Aquinas is committed to prime matter as a “persistent substratum” (p. 636). Admittedly, this is how Scotus and Ockham characterize Aquinas's view, and so Adams's account does justice to the dialectical situation she is concerned with. From that perspective, I think the notion of prime matter is incoherent, just as Scotus and Ockham charged.

For this same perspective, see Cross (1998), ch. 2. In the terms of his useful analysis, I am denying that Aquinas is committed to the “substrate condition” (see pp. 257–58).

- 3 A particularly clear discussion of the soul's explanatory role comes at *InMet* VII.10.1484–85: “An organic body can be defined only through the soul. . . . That this is true is clear through the fact that if someone rightly defines a part of any animal, he can do so rightly only through its proper operation. . . . But that operation of the parts does not exist without sense, motion, or other operations of the parts of the soul. *Thus anyone defining a part of the body must make use of the soul.*” On the soul's having parts, see §§5.1 and 5.2; on the relationship between the soul's parts and the body's operations, see §6.2.
- 4 Specifically, it is compatible with functionalist accounts that treat token mental events as reducible to brain states but give functional definitions of mental properties such as *pain*. It is also compatible, so far as I can see, with views on which persons are constituted by but not identical to their bodies (see Baker 2000).

I don't pretend that these brief remarks in the main text adequately explain the intended sense of reduction. It seems to me, though, that to do much better would require quite an extended discussion. What is here is indebted to Kim (1999).

In speaking of a conceptual distinction, as opposed to a real distinction, I don't mean to invoke any technical medieval machinery. Aquinas regularly uses the terminology of “real distinction” and “distinction of reason” (e.g., 28.3, 39.1), but he never seems to discuss these concepts in any detail. I follow his lead on that score.

- 5 Discussing the distinction between *rational* and *animal*, Aquinas remarks that “the distinction of species and genus does not require a real distinction between forms, but only an intelligible distinction” (*QDSC* 3 ad 3). Insofar as the matter-form distinction is of the same kind, this of course supports my reading. But Aquinas seems hesitant to come out and explicitly make the claim I am making. One interesting passage is 85.5 ad 3, where he discusses two kinds of composition in material things: form-matter, and accident-subject. He explicitly refers to the latter as a “real composition,” but he notably refrains from saying this of form-matter composition. (He does go on to remark generally that “things composed *in re* are distinct,” but to a medieval reader that would have clearly left open the question of whether the distinction is real or conceptual.)

De ente 2.201–210 [12] contrasts the conceptual composition of *rational* + *animal* with the real composition of soul + body. But there is no doubt about a real distinction between soul and body; the question is how form and matter are composed.

Some of Aquinas’s near contemporaries argued explicitly for a distinction between form and matter. See, for instance, John Pecham’s argument for why “God could make matter without form” (*Quodlibet* 4.1). This is a claim Aquinas would clearly have to deny.

- 6 The Treatise is not as explicit on these points as it should be. Still, this last point is made in 76.7c:

The unity of a thing composed of matter and form comes from the form, which is in its own right united to the matter, *as its actuality*. Nor is there anything else that unites – except the agent that makes the matter actually exist (as is said in *Metaphysics* VIII).

It is hard to see the force of this remark until one knows what to look for. In light of the commentary on *InMet* VIII, we can see that the highlighted phrase doesn’t just explain what form does (provide actuality). The point of the phrase is to explain *how* form is united to matter: as the matter’s actuality. So form and matter are united – are one thing – because there is nothing here beyond a single actualized substance.

The reductive nature of the account is also apparent in this passage:

The soul certainly is exceedingly distant from the body, if one considers the conditions of each one apart from the other. So if each of them were to have existence separately, then many intermediaries would have to intervene. But inasmuch as the soul is the body’s form, it does not have existence apart from the body’s existence. Rather, by its own existence the soul is immediately united to the body (76.7 ad 3).

If we were to conceive of soul and body as distinct things, then we would have a real puzzle about what unites them. How could they communicate? Why would they remain in the same place? Such an account would call for “many intermediaries” to bridge the gap between material and immaterial, extended and simple. Reductive hylomorphism dissolves these difficulties: soul and body are “immediately united” not in the sense of being stuck together, but in the sense of being one thing.

- 7 It has been suggested to me that there’s something anachronistic in describing Aquinas’s account as a bundle theory, but I don’t see why this is so. The term is not Aquinas’s, admittedly, but there seems nothing distinctively modern about describing the composition of substances in these terms. Indeed, for a discussion of still earlier (and less sophisticated) theories of this kind, see Sorabji (1988), ch. 4, who speaks of “bundles of properties.”

I should make clear, too, that in speaking of a bundle theory I don’t mean to invoke all of what standardly comes with modern theories of this kind. In contemporary metaphysics, a bundle theory of substance is generally thought of as a theory on which a bundle of properties is held together by some kind of fundamental relation, sometimes called *comprehenence*. Aquinas’s theory of substantial form takes the place of this obscure notion of *comprehenence*, and has the further benefit of supplying identity conditions over time, so that a bundle need not be identified with the set of its properties at any one time (see §12.4).

- 8 Aristotle had criticized the ancient refusal to postulate spiritual beings: “they posit the elements of bodies only, not of incorporeal things, though there are incorporeal things” (*Met.* I 8, 988b24–26; cf. *InMet* I.12.181). Though Aquinas is of course opposed

to the ancients on this score, it is noteworthy that he doesn't attack them on this ground. Instead, he goes after the root of the problem, their misconceived metaphysics (§§1.4 and 3.4).

- 9 Aquinas raises a version of this question at 76.3 obj. 1, which asks how a single form can have one part that is corruptible and another part that is not. Here the point is not just to stress the different characteristics of the different parts of soul but to stress that some parts of the soul survive death, whereas other parts seemingly do not. For his answer to this question of how the soul can be only *partly* immortal, see §12.3.
- 10 Stump (1995) approaches the kind of account I offer here when she proposes “a broader way to understand his [Aquinas's] view of forms,” according to which “being . . . is being configured” (p. 513). But on her view the human soul cannot be a form of this sort, and so she remarks that this “introduces an ambiguity into the notion of form” (p. 514). In view of this ambiguity, she ascribes to Aquinas a kind of dualism of soul and body. On my view, in contrast, the whole beauty of Aquinas's metaphysics is that there is no such ambiguity in the conception of form, and hence no such dualism.

Chapter 5. The soul and its capacities

- 1 Following Aristotle's lead in *Metaphysics* Zeta, Aquinas sometimes uses ‘substance’ and ‘essence’ interchangeably, so that each picks out the composite of common matter and substantial form. Both exclude the entity's accidental forms and particular (signate) matter (see §In.3). But here in *SCG* he is clearly using *substantia* to refer to the whole composite entity. So here type-B potentiality is described as the potentiality for the whole substance to have existence. For present purposes, however, it is preferable to stick with the terms of 54.3c, quoted earlier, where it is essence that is in potentiality for existence.

In the context of the angels, these two usages collapse, because their essence just is their form, and the form just is the angel.

- 2 Aquinas explains this phrase by saying that “a thing is said without qualification to be *in potentia* for something when it can immediately be brought to actuality by a single mover. Thus we say that a statue can be made not from the earth, but from copper, even though copper is made from the earth” (II *SENT* 19.1.2c). See also *InMet* IX.6.1837.

The nature of this receptive, ABC-type potentiality differs from case to case. In particular, the immaterial soul is receptive in a very different way from how material things are. See II *SENT* 17.1.2 ad 2: “Being affected, receiving, and all such terms, are applied equivocally to the soul and to material things. . . .”

- 3 See *Theories*, pp. 259–62, where I stress how the external senses are fundamentally different in this regard from imagination and intellect. Whereas the external senses merely receive their objects from without, imagination and possible intellect form their own objects: imagination forms phantasms, and intellect forms a mental word.

The new account of 77.3c also occurs in *InDA* II.6.131–55 and *QDA* 13c, both nearly contemporaneous with the *Treatise*. There might seem to be some tension between this account and various Aristotelian doctrines. In the *De anima* Commentary, for instance, Aquinas follows Aristotle in identifying food as the object of the nutritive power (II.9), and phantasms as the objects of intellect (III.12). But even in this same work he argues that “the objects of active powers are the things they produce” (II.6.139–40). Aquinas sees no tension, however, because he conceives of active powers as having two sets of objects, corresponding to their inputs and their outputs. (See §8.2 for discussion.)

- 4 Aquinas's account of dispositions is more complex than these last two sentences might suggest. In fact, he explicitly rejects the idea that dispositions and capacities might be distinguished in terms of acquired versus innate. (He attributes that view to Simplicius.) Some qualities that Aquinas wants to count as dispositions are in fact innate, such as good health. The main text points only in the general direction of a satisfactory distinction between the soul's capacities and its dispositions. For further details, see 12ae QQ49–54, esp. 49.2c.
- 5 In speaking of a *real distinction*, one might mean only that the distinction is not merely *conceptual*. That is certainly true. But it's peculiar and misleading that Aquinas's follow-

ers regularly embrace Scotus's way of characterizing the theory (see *Reportatio* II.16). Pietro Caramello, editor of the Marietti edition of *ST* 1a, appends to 54.3c a note intended to clarify Aquinas's position: "Every created substance, therefore, acts by means of an operative capacity that is *really distinct* from it." Suttor, in a note to his translation of 77.1, writes that "there is a plurality of powers, *really distinct* from the soul and from each other" (my emphasis twice). These remarks suggest that Aquinas recognizes and rejects the possibility of a middle ground (a formal distinction?) somewhere between being identical and being *really* different. This flies in the face of what Aquinas actually says here: for him the question is simply whether the soul's essence and its capacities are or are not the same.

For parallel discussions, see 54.3, 79.1, I *SENT* 3.4.2, *QQ* 10.3.1, *QDSC* 11, *QDA* 12.

- 6 Since God doesn't perform the various imperfect material operations that we perform, it is not immediately obvious how to rewrite the second premise. We don't want to rewrite the second premise as stating that, e.g., *Only in God's case is his sensory operation the same as his existence*. Instead, we might say, *In no case is a thing's sensory operation the same as that thing's existence*. As we'll see, Aquinas's arguments for the second premise would apply equally well to such a revision.

- 7 "In another way, existence is said to be the actuality of an essence, in the way that living, which is existence for living things, is the actuality of the soul – not second actuality, which is an operation, but first actuality" (I *SENT* 33.1.1 ad 1). Below in this section I consider the distinction between first and second actuality.

Esse is often translated as *being* rather than *existence* – perhaps in order to suggest something more full-bodied than generic existence. But although *being* has more mysterious connotations than *existence*, it doesn't strike me as capturing any better that full-bodied sense.

For helpful discussions of the essence – existence distinction, see Geach (1954–55); Wippl (1984), pp. 107–61, (2000), pp. 132–76; Kenny (1987); Burrell (1993), pp. 62–70; and Kretzmann (1999), pp. 256–67.

- 8 It is by no means obviously true for all of our nutritive operations, and so Aquinas would have to count on one of his other arguments in those cases. He also needs another argument to account for angels, which are always actually engaged in intellectual cognition (see 58.1, 79.2c, §12.2). That is why at the beginning of this argument he explicitly limits its scope to creatures with souls.

- 9 For the case of God, see 25.1, *QDP* 1.1, *SCG* I.16, II.7. God is excluded from the above argument not just because it is confined to beings with souls, but also because the conclusion concerns only what has a capacity in the sense of being *in potentia*. As explained in §5.1, to be *in potentia* refers to capacities of types ABC. If this restriction were not in place, then the argument's conclusion would be false, because God does have various capacities in virtue of his actuality – indeed, God's various capacities just are his actuality.

- 10 Cf. *QDP* 1.1c: "There are two kinds of actualities: first actuality, which is form, and second actuality, which is operation."

It is possible, at the risk of some confusion, to complete the picture by considering first and second potentiality. First potentiality is having the mere capacity to engage in an operation. Second potentiality is having the acquired disposition that enables one to perform the action on command (see *InDA* II.11.21–53, II.12.11–26). Hence the distinction between kinds of potentialities enables Aquinas to distinguish between the innate capacities that are the subject of *Q77* and the (typically) acquired capacities (*habitus*) that are discussed beginning at 12ae Q49 (see §5.1).

It is easy to get confused, however, in mapping these potentialities onto actualities. Having knowledge, Aristotle's example of a first actuality, is an acquired capacity and hence a paradigmatic second potentiality. But it does not follow that all first actualities are second potentialities; the soul is a first actuality, for instance, but not a second potentiality. Indeed, the soul gives rise to a set of first potentialities: having the innate capacities of sense and intellect. So one has to be cautious in using this Aristotelian terminology, a point that Aquinas himself makes at *QDA* 12 ad 14.

- 11 In a note to his translation of 77.1, Suttor describes Aquinas as holding to a real distinction between the soul's powers and its essence, and then he remarks: "Scholasticism at large followed Thomas on this last point; even Duns Scotus's disagreement seems to be verbal" (pp. 90–91). It is at least misleading to attribute a "real distinction" to Aquinas (see note 5); it is also wrong that scholasticism largely followed Aquinas's lead here (see note 12). But it is more plausible to question how far Scotus's formal distinction really takes him from Aquinas's view. For a more judicious statement of this suspicion, see Gilson (1952), who wants to raise "at least the possibility" that Aquinas and Scotus might be neither agreeing nor disagreeing, but simply making different kinds of claims (p. 498). Cajetan, writing early in the sixteenth century, refers to the disagreement between Thomists and Scotists as "a highly thorny question" (76.1.18).
- For further discussion of Scotus's views on this subject, see Grajewski (1944), ch. 8. On Scotus's formal distinction in general, see Wolter (1965). On Henry of Ghent, see his *Quodlibet* III.14, and also the discussion of his view in the works by Scotus and Ockham cited below.
- 12 For worthwhile surveys of views prior to Aquinas, see Künzle (1956) and Lottin (1957), vol. I, pp. 483–502. It became standard well before Aquinas to draw a distinction between the soul and its powers, and the distinction would continue to have many supporters in the later thirteenth century, including Godfrey of Fontaines (see Wippel 1981, pp. 202–7). Still, according to Schepers (1972), the identification of the soul's essence and its capacities became the *opinio communis* at Oxford in the early fourteenth century (p. 108). Schepers shows how Robert Holcot (fl. 1330s) accepted that identity, and how William Crathorn, drawn as always to extreme positions, took the unprecedented and unpromising step of identifying the soul, its capacities, and its actions (*Sent.* Q1, pp. 74–97).
- 13 *Reportatio* II.20 (p. 436). Although the principle is associated with Ockham, Scotus had already appealed to a similar principle in denying the real distinction: "We should posit few, where many are not necessary" (*Reportatio* II.16; vol.23, p. 73). See **The Razor**, p. 179).
- 14 "The soul, in terms of [*secundum*] its essence, is the form of the body" (*QQ* 10.3.2 ad 4); "the soul, in terms of its essence, is an actuality" (77.1c). The reason Aquinas appears to be saying something else in 76.1 is that he is using the term 'intellect' in a less precise way. In fact, 76.1 more often refers not to the *intellect*, but to the *intellective principle*, a subtlety that will become particularly important in the next section.
- Failing to see the balancing act that Aquinas must perform, Wéber (1970) claims that 76.1c "*consigne en un texte décanté et limpide une conception qui fait violent contraste avec certaines propositions de la q.77*" (124). This leads him to the bizarre suggestion that Aquinas, after writing the Treatise, came to reject the distinction between the soul and its powers and then revised certain passages to reflect his new view. In rejecting this claim, van Steenberghen (1977) stresses much the same point I am making here: "*l'abandon de la distinction réelle de l'âme et de ses puissances d'opération eût mis S. Thomas dans une situation inextricable, car, dans cette hypothèse, il devenait impossible de soutenir l'union substantielle de l'âme et du corps sans sacrifier le caractère immatériel ou inorganique de l'intellection*" (p. 360).
- 15 See Pasnau (1997b) for a detailed discussion of Olivi and the Council of Vienne. In Pasnau (forthcoming-c) I discuss the mind-soul problem in more detail, and show how Cartesian dualism can be understood in this context. Among philosophers frankly puzzled by the requirement to make the rational soul the form of the body were two of the greatest of the fourteenth century, Peter Aureol (*Sent.* II.16.1.2, pp. 223–26) and John Buridan (see Zupko 1993).
- 16 The role of this assumption is particularly vivid in his discussion of the soul's immortality. In 75.6 and throughout Q89, Aquinas frames the issues around the soul's immortality, rather than the intellect's immortality. (89.1 even questions whether the separated soul will be able to use intellect (§12.2)). But 75.6 crucially depends on a tight connection between soul and intellect. Its central argument rests on the *human soul's* subsistence, as proved in 75.2. But, strictly speaking, 75.2 shows only that the *intellect* is subsistent. Aquinas is well aware of this point: he begins the reply to 75.6 by writing, "It is neces-

sary to say that the human soul, which we call the intellectual principle, is imperishable.” The assumption that there is a tight relationship between intellect and soul still needs to be discharged.

- 17 Although Aquinas does not say so explicitly until 79.4c, the argument here applies only to the possible intellect. He introduces agent intellect only in 79.3; then, in 79.4, he locates agent intellect within the soul; then, in 79.5, he establishes that each human being has one. So it is premature, at this point in the Treatise, to suggest that the place of intellect has been entirely nailed down. Still, Aquinas establishes as much as he needs in 76.1 to avoid the problem of circularity, and he defers until Q79 those issues that need not be settled right away.

Here again, the care with which the Treatise has been structured cannot be overstated, a finding that helps to validate this book’s strategy of focusing on the Treatise as the most polished and revealing of Aquinas’s various “rough drafts” (§In.2).

- 18 The reference seems to be to *Physics* IV 4, 211a6–11. But Aristotle expresses himself far more definitely back at *De anima* I 1, 402b25–403a2:

For the starting-point of every demonstration is what a thing is, so that, for those definitions which do not enable us to ascertain the attributes nor even make it easy to guess about this, it is clear that they have all been stated dialectically and to no purpose (tr. Hamlyn).

Aquinas stresses this point about definitions in many other places, e.g., *InDA* I.1.247–273, I.11.197–200; *InPh* IV.5.447; *QDSC* 11c.

- 19 But see §12.4 for some further considerations, as well as Wippel (2000), pp. 266–75. This “deepest level” raises some very perplexing issues. One concerns free will in the face of divine providence (see **Providence**, p. 205). I don’t know what to say about Aquinas’s views in this area.

Another related question concerns exactly how much is entailed by a thing’s essence. Even where particular essences are concerned, Aquinas surely does not hold the Leibnizian view that a substance has a complete notion that “contains all of its predicates, past, present, and future” (Leibniz 1989, p. 32). My being sunburned last winter, for example, cannot be read off of my essence. But the fact that my skin is inherently susceptible to sunburn could, in principle, be obtained from my essence. Cf. *De ente* 4.127–30 [27]: “everything that holds true [*convenit*] of something is either caused by the principles of its nature, as is a human being’s capacity for laughter, or comes to it from an external principle, as light in the air comes from the sun’s influence.”

In 77.6c, Aquinas argues that (1) the accidents of a human being are caused by their subject; (2) that subject is either the human soul or the compound; (3) the compound is itself caused by the human soul; and therefore (4) the soul’s capacities, as accidents of the soul, flow from the soul as their source (or cause). But he qualifies the first step of the argument by noting that he is talking only about “proper and per se” accidents, not “external” ones. How this distinction should be understood is to me unclear. The question doesn’t arise for God’s knowledge, however, and so it needn’t be addressed in *QDV* 2.7: since God knows the particular essences of everything, from his point of view there are no “external” accidents. Everything fits together, embraced by God’s all-encompassing wisdom.

- 20 Aquinas uses some form of *ignotae* in almost every passage where he discusses the “unknowability” of essences (see references below), a notable fact given that the passages vary greatly in the rest of their terminology. For another case (in Henry of Ghent) where *ignotus* bears the sense of knowledge by acquaintance, see my discussion in *Theories*, pp. 222–24. For other contexts in which *ignotus* clearly must bear this meaning for Aquinas, see *InDA* II.19.58–63, III.8.136.

Sometimes Aquinas qualifies the remark that essences are unknown, as at 77.1 ad 7: “substantial forms are unknown to us *in their own right* [*secundum se*].” See also *QDSC* 11 ad 3, *InPA* II.13.119–21 [§533]. More often than not, however, Aquinas omits the qualification – see *InDA* I.1.254–55 (quoted earlier), I *SENT* 25.1.1 ad 8, II *SENT* 3.1.6c, *QDV* 4.1 ad 8, 10.1c, 10.1 ad 6, *QDP* 9.2 ad 5, *InGC* I.8.62, *InMet* VII.2.1277, VII.12.1552.

Sometimes, instead of saying that essences are unknown (*ignotae*), he says – as we should now expect – that they are hidden (*occultae, latentes*). See *InPA* 1.4.303–7 [§43] and *InDA* II.2.44–46. Perhaps the inspiration is Averroes (commenting on *Met.* VIII 2): “the differentiae listed are accidents, but they are used in place of substantial differentiae because the latter are hidden [*latentiam*]” (*In Met.* VIII.5).

For the claim that essences become known through their accidents, see 18.2c, 2a2ae 8.1c, *QDSC* 11 ad 3, *InDA* I.1.259–60, II.2.20–25, *QDV* 10.1 ad 6, *InGC* I.8.62, and *InPA* I.4.303–10 [§43], II.13.119–31 [§533].

Often, Aquinas remarks that accidental forms are sensible (see §6.3), whereas substantial forms are grasped solely by intellect. See *InDSS* 9.135–40 (10.136), *InDA* II.2.14–17, and II.14.295. *QDP* 3.5c contains a nice discussion of how early philosophers didn’t understand substantial forms because they couldn’t see them. This should be read in light of the material in §3.4.

Later medieval authors became increasingly pessimistic that knowledge of accidents could lead us to back to the essence of a thing, and this pessimism directly affected their work on the soul. See Zupko (1998b) for the cases of John Buridan and Peter d’Ailly. These issues deserves further sustained study, informed by the Aristotelian background of the *Posterior Analytics*.

Chapter 6. Sensation

- 1 “Just as the other senses come about through an extrinsic medium, so touch and taste come about through an intrinsic medium, flesh” (*InDSS* 4.266–68 [5.75]; see *InDA* II.22). The organ of touch and taste, Aquinas says, is near the heart (*InDA* II.22.40; *InDSS* 4.276–85 [5.76]). Compare Aristotle, *De sensu* 2, 439a1.

In translating 78.3c as “either air or water, or both,” I am following the manuscript reading. The Leonine edition emends *vel aer, vel aqua, vel utrumque* to read *vel aer, vel aqua, vel aliquid huiusmodi*.

- 2 Here, for the first time, I am using ‘function’ in its explicitly teleological sense, where it is roughly synonymous with ‘purpose.’ It is easy to conflate this teleological sense (“What is its function?”) with the nonteleological sense (“How is it functioning?”). For an explicitly nonteleological analysis, see Cummins (1975), sec. III. In other chapters, ‘function’ serves merely to pick out what Aquinas calls an *operatio*. But for Aquinas, *operatio* is always implicitly teleological. Strictly speaking, an operation is a special kind of action: “the act of what is complete” (*InDA* I.10.208). So not just any action counts as an operation or function. A thing operates only when it is acting in accordance with its complete, fulfilled nature. To operate, then, is to act in the way nature intended.

Although it is not generally controversial to suppose that scientific explanation requires teleology, the proper analysis of such claims is enormously controversial. For a useful overview of historical and contemporary uses of teleology, see Lennox (1992). For influential discussions, see Woodfield (1976) and Wright (1976). For a recent account of cognition in terms of a thing’s “proper function,” see Millikan (1993).

- 3 I discuss sensory passivity at length in *Theories*, ch. 4 (see esp. pp. 144–45). Aquinas seems committed to an extreme version of the doctrine that the senses are entirely passive in their operations. But §9.2 shows how this view must be qualified in light of Aquinas’s theory of sensation per accidens.
- 4 See also 1a2ae 91.2 obj. 1, *QDV* 12.2 obj. 3. This claim comes straight out of Aristotle; the *De anima*, for instance, holds that “nature does nothing in vain [*matên; frustra*], nor fails in necessary things” (III 9, 432b21–22). The usual translation is ‘in vain,’ but the meaning is expressed less ambiguously by saying that nature does nothing that is pointless or superfluous. An intelligent creator supplies just what is needed: no more, no less.
- 5 See also *QDV* 3.1c, *QDP* 3.15c, *SCG* III.70, and the last two pages of the entry for *natura* in Schütz (1895). Aquinas regularly invokes the phrase *opus naturae est opus intelligentiae*, attributing it either to the Philosopher or else, more generally, to the philosophers. There does not, however, seem to be any ancient source for that exact phrase. Aquinas’s immediate source was perhaps Albert the Great (see Weisheipl 1980).

Aquinas sometimes seems to recognize how weak a reed his principle of parsimony really is. In the following passage, for instance, he first appeals to that principle, then supplements it with a further consideration:

Thus even the mole, which belongs to the class of complete animals, seems to have eyes under its skin, and so is made like [the rest of] its genus. But because it dwells underground sight was not necessary for it; also, if it were to have exposed eyes, the earth would harm them (*InDA* III.1.131–35).

Why doesn't the mole have exposed eyes? First, because they were not necessary (and, implicitly, because nature does not supply that which is not necessary). Second, because having exposed eyes would have done the animal harm. The latter, of course, appeals to a teleological principle that we would be inclined to accept.

On the distinction between methodological and metaphysical principles of parsimony, see Arieu (1977), who also recognizes the teleological status of this principle in Aquinas.

- 6 For a sustained discussion of Aquinas's contrast between natural and spiritual impressions, see *Theories*, ch. 1. Note, in particular, that a spiritual alteration need not be any less physical than a natural alteration. As Aquinas describes the difference in 78.3c, a natural alteration involves the recipient's actually taking on the quality of the thing affecting it. Thus both the air and the eye receive color spiritually, not naturally, because they do not actually become colored. The air receives sound naturally, because the motion of the object actually puts the air in motion.
- 7 Aquinas stresses the general point at *InDSS* 13: after claiming that "capacities are distinguished in terms of objects" (55–56 [14.194]), he adds that "diversity in the *manner* of sensing diversifies the senses" (65–66 [14.195]). See also *QDA* 13c: "Proper sense . . . is necessarily distinguished into different capacities according to the variety of impressions made by the sensibles."
- The example of seeing through one's fingertips is discussed in Sorabji (1971), p. 64, and also, in the seventeenth century, by Boyle (see Wilson 1995, p. 246). For a contemporary treatment of these issues that is similar in many respects to Aquinas's, see Heil (1983), ch. 1.
- 8 To his Aristotelian-trained audience, Aquinas can simply note that he is talking about the third kind of accident described in the category of quality, the so-called affective qualities (*Cat.* 8, 9a35–b7). The list of qualities is incomplete because the sense of touch has many different proper objects, including hot-cold, wet-dry, heavy-light, etc (see *InDA* II.13.31–33). Aristotle seems to give a complete list at *De gen. et cor.* II 2, 329b19.
- 9 Cf. Aristotle, *De sensu* 445b7–9: "each of these [sensibles] is capable of producing sensation: for they are all so-called because of their ability to bring this about." Aquinas's commentary on this passage (*InDSS* 14.29–34 [15.209]) stresses the point even further. On alteration as qualitative change, see *Physics* V 2, 226a23–34.
- 10 Sorabji (1971), pp. 55–57, makes this same point as regards Aristotle. For more discussion of this issue, in Aquinas and Albert the Great, see Pasnau (2000b). Aquinas does regularly describe the common sensibles as the objects of more than one sense, and the proper sensibles as the objects of just one sense. See, e.g., *InDSS* 1.239–42 [2.29], 5.10–13 [6.77], 10.146–49 [11.155]. But he is consistently clear about the proper explanatory order.
- 11 Although Aquinas goes on to defend this remark in some detail, it is not clear exactly what kind of *reduction* he has in mind. Size and number, he remarks, just are kinds of quantity. Shape "consists in the limitation of size." As for motion and rest, he remarks that to sense these is "in a way to sense one thing and many" – *one thing*, presumably, when the object is at rest, *many* when it is in motion. Here the reduction seems to be epistemological rather than ontological: to perceive motion and rest is to perceive something quantitative.
- 12 Barnes (1987), p. 254 (= Diels-Kranz B 125). I haven't found that particular phrase used by a medieval author, but Democritus's views were explicitly described by Aristotle, at *De sensu* 442a29–b23. In the face of Democritus's reported claim that all sensibles are tangible, Aquinas replies, "if this were true, it would follow that each sense would be the sense of touch, because capacities are distinguished in terms of objects" (*InDSS* 10.132–34 [11.154]).

- 13 The *locus classicus* for the dispositional view is of course Locke (see, e.g., *Essay* II.viii); for a recent attack on theories of this kind, see Boghossian and Velleman (1989). Everson (1997), pp. 103–25, considers and rejects a dispositional interpretation of sensible qualities in Aristotle.
- 14 Where Aristotle says that the motion of air *is* sound, Aquinas writes instead that motion “gives off [*reddit*] sound” (*InDA* II.17.64–65). Another apparent identification at *De sensu* 446b30–447a1 is replaced with the claim that “sound results [*consequitur*] from a kind of local motion” (*InDSS* 15.272–73 [16.244]). But see *InDA* II.18.69, where Aquinas’s simply repeats Aristotle’s apparent identification.

There are many other passages where Aquinas insists that the relationship is one of causality, not identity: e.g., “Sound is *caused* by the air’s being struck and put in motion” (78.3c); “sound is the *result* of motion” (*InDA* II.17.135); “sound is *generated* by motion” (*InDA* II.17.137–38).
- 15 Descartes dismisses talk of real qualities as “unintelligible” (*Principles* IV.198); see Menn (1995) for a penetrating study. Boyle writes at length on this topic. See, esp., “The Origin of Forms and Qualities.” For discussion, see Hutchison (1991). For more on medieval efforts to avoid the reduction of sound to motion, see Wittmann (1987), esp. vol. I, pp. 282–90, and Pasnau (2000b), where I discuss the plausibility of the nonreductive stance.
- 16 More precisely: “Of all those things around us which ‘have’ a particular colour, the great majority owe their colour to their ability to absorb light of some energies more readily than light of others. . . . A given material can absorb photons only of particular energies because each arrangement of an electron cloud contains a specified amount of energy” (Rossotti 1983, pp. 38–39). For recent discussions of physicalism in the case of color, see Hardin (1988), ch. 2; Boghossian and Velleman (1991).
- 17 Irwin (1988), pp. 313–15, holds that with regard to sensible qualities Aristotle rejected realism entirely. The key passage is *De anima* III 2, 425b26–426a28, where he writes first that “the actuality of the sensible and of the sense is one and the same” (425b26), and then that “if motion and action are in the thing acted on, both the sound and the hearing, as actual, must be in that which is potential” (426a2–4) – in the sense, in other words. Soon after he adds, more generally, “the actuality of the sensible and the actuality of the sense capacity are in the sense capacity” (a10–11). It is not entirely clear how these texts should be read, and there are other passages that point in other directions (see, e.g., *De an.* II 5, 417b19–21), but Aristotle certainly seems to be saying here that the actual objects of sensation are within the senses, not outside of them.
- 18 Mackie (1974) discusses this problem: “there is no doubt that we tend . . . to be more ready to call some kinds of factors causes than others. There are no firm rules governing this selection, but there are some fairly systematic tendencies” (p. 34). He proposes a distinction between causes and the “causal field,” the standing conditions against which explanations are given.

Aquinas’s account has as its modern analogue the so-called causal theory of perception, according to which *S* perceives *M* just in case *M* is the (appropriate sort of) cause of the perception. Such accounts are generally thought to founder on the difficulty of filling in the above parenthetical restriction. (See, e.g., the remarks of Dretske 1981, pp. 156–57. The classic defense is in Grice 1961, who acknowledges that the distinction between causes and standing conditions is of little help here.) It would be misleading to ascribe a causal theory to Aquinas, because he analyzes mental representation in terms of a likeness relationship (see *Theories*, ch. 3). But he does appeal to causal facts to pick out which thing in the external world serves as the proper object of sensation. Likeness alone can not decide that question, because the sensible species is a likeness of the species in medio just as much as it is a likeness of the sensible quality itself.

It may be that Aquinas’s account inherits all the problems of resemblance accounts, *plus* all the problems of causal accounts. But one might hope, more optimistically, that a hybrid approach would prove more resilient to objections. I do not pursue that issue here.

- 19 But cf. *InDA* III.2.146–84, where Aquinas simply recites Aristotle’s words, seemingly untroubled by their implication. This illustrates the hazards of relying uncritically on the Aristotelian commentaries. For evidence of a different sort as to Aquinas’s own views, see

his account of the Eucharist at 3a 77.1c. There he argues that the sensible qualities of the bread and the wine must remain in the host during transubstantiation. They cannot be made attributes of the air (or of our perceptual faculties), because that is not where such qualities are located.

- 20 Aquinas uses this stock example to illustrate both an external impediment and an internal defect. Since the surface of the tongue is not the organ of sense but just the medium (see §6.2, esp. note 1), the wrong sort of coating on the tongue should, strictly, be a case of an impediment. But in both *InDA* III.6 and 17.2c, he uses the case of the sick person to illustrate a defect in the organ of taste. It is clear, at any rate, that he has in mind two different sorts of qualifications to the claim of infallibility: this is clear in *QDV* 1.11c, which mentions both qualifications.
- 21 The same remarks hold for the intellect's apprehension of quiddities, although §10.5 considers some special complications in that case. Kretzmann (1992) likewise stresses the teleological nature of the infallibility thesis, although he reaches this conclusion from a different direction.
- 22 This is particularly so when the relevant textual evidence is drawn from the *De anima*, *De sensu et sensato*, or *De memoria*. Since Aquinas wrote commentaries on these works, and since his Aristotelian commentaries provide a literal restatement of the text, it is usually possible – except in cases of dramatic disagreement over translation or interpretation – to find Aquinas saying whatever Aristotle said. One only has to look at the appropriate section of the commentary.

Some critical texts on the common sense are located in sections of the *Parva naturalia* – particularly the *De somno* and *De insomniis* – that Aquinas did not write commentaries on. He was nevertheless quite familiar with these works, and cites them frequently (see, e.g., 84.8 ad 2).

- 23 Everson (1997), pp. 148–57, contends that for Aristotle the common sensibles are the objects of the common sense, and are perceptible by the external senses only “*qua* the common sense” (p. 156). This has been a controversial reading of Aristotle; it was shared by Albert the Great (*Summa de homine* 35.4), for example, but not by Themistius (81,18–82,38); it seems to depend, in large part, on *De an.* III 1, 425a15, where Aristotle describes the common sensibles as being perceived per accidens. But Aquinas (like many other commentators) takes the passage to read “*not* per accidens” – a plausible emendation (as his commentary makes clear), and one that leaves him with no doubt that the common sensibles are perceived per se by the external senses.

For the earlier medieval background to Aquinas's views on the common sense, see de Libera (1991).

- 24 Could phantasia perform these operations? Aquinas rules that out at *InDMR* 2.171–74 [321], where he explains that phantasia does not play the sensory role of receiving impressions: “it is necessary for there to be different powers for (a) the reception of sensible forms, which pertains to sense [including common sense], and (b) the conservation of them, which pertains to phantasia or imagination.” It is not easy to see how phantasia can be limited to merely preserving images, but I reserve that topic for §9.3.
- 25 There is textual controversy here. A straightforward reading of *De an.* III 2 would suggest that Aristotle is attributing second-order perception to the external senses themselves; if so, then he changed his mind between writing the *De anima* and *De somno* 2, 455a16. (This is the reading offered, e.g., by Modrak 1987, pp. 66–67.) Aquinas, never inclined to a developmental interpretation, rejects that reading. Although he is careful to leave the matter open during the course of commenting on the relevant texts in *De an.* III 2, he makes it clear at the start of the discussion (*InDA* III.2.1–17) that second-order perception is meant to be an action that requires a common sense. Then, at the start of the chapter that follows, Aquinas clarifies the overall state of the argument:

Aristotle set out earlier to investigate the common sense on the basis of the operation by which we sense ourselves seeing and hearing. On the basis of this operation, he arrived at the conclusion that the visual capacity senses seeing, although in a different way than it senses an external sense object. What has not yet been established, however, is that the capacity capable of judging the actions of the

senses is single and common. So Aristotle now goes on further to investigate this sort of power through another [viz., the comparative] operation . . . (III.3.1–10).

- 26 On Aristotle, see, e.g., Kahn (1966), who speaks of “a single, unified sense faculty, of which the individual senses are so many diverse modes or aspects” (p. 67), and Modrak (1987): “The common sense is not a separate sense; it just is the capacity for the joint exercise of several senses” (p. 65).

The strongest evidence for so reading Aquinas comes from the following passage:

. . . as a result, it belongs to the same power to see (a) color and (b) the impression that is made by color, (a') the thing seen in actuality and (b') the seeing of that thing. Therefore the capacity by which we see ourselves seeing is not outside the visual capacity, but differs from it conceptually (*InDA* III.2.140–45).

This is not a literal paraphrase of the *De anima*, but a spelling out of the conclusion that Aquinas takes Aristotle to be arguing for at 425b22–426a1. It seems that (a) and (a') are ways of talking about the operation of sight, and that (b) and (b') are ways of talking about second-order perception. These two operations “belong to the same power.” The claim, then, seems to be that the external senses differ from the common sense only “conceptually.”

We should resist this interpretation. The passage should be read as claiming that some sort of visual power, whatever it may be, is both capable of seeing color and also capable of second-order perception. At this point in the *De anima*, Aquinas reads Aristotle as wanting to leave open the question of whether this “visual power” is in fact the external sense of sight, or instead a common sense (see the previous note). Cf. 87.3 obj. 3, which takes for granted that the *De anima* establishes “a proper sense does not sense its own act; instead, this is the role of the common sense.”

- 27 Aquinas’s most explicit remarks on the common sense as a distinct sense come in his *De sensu* commentary, where he breaks from his word-by-word exegesis to offer some cautionary words on the doctrine of the common sense. The passage at issue is 449a8–10, where Aristotle writes “there must be some one [capacity] of the soul by which it senses all [its objects] . . . , although different kinds [of objects] through different [means].” Aquinas is worried that the common sense, when so described, will appear to be the only sense, leaving the external senses as mere aspects of that one common sense. So he immediately adds these words:

It is important to consider here that wherever different capacities are ordered, the lower capacity is related to the higher one as its instrument, inasmuch as the higher moves the lower. An action, however, is attributed to the principal agent, through the instrument, as when we say that through his saw, the builder cuts. And it is in this way that the Philosopher says here that the common sense senses through sight, through hearing, and through the other proper senses. These are distinct parts (as capacities) of the soul . . . (*InDSS* 18.130–140 [19.287]; see also 57.2c).

The point, clearly, is to insist that the common sense and the five external senses are each distinct. The common sense is the common root and source not as a shared common core, and not as the collective force of all five capacities, but instead as one capacity is ordered before another. This suggests that we should understand the common sense in light of 77.7, where Aquinas has already discussed the ways in which one capacity of the soul can be ordered to another. There it was intellect that was said to be both the source of the senses and their common terminus. And this suggests that as the common sense is related to the external senses, so the intellect is related to all the senses. (Cf. *InDA* III.12.142–95, where the description of common sense as the central point of focus for the external senses is explicitly applied to intellect as well, relative to all the senses.)

- 28 Cf. *InDA* III.2.89–97:

The action of sight can be considered on one hand inasmuch as it consists in the impression on the organ by an external sensible. In this way only color is sensed, and so by this action sight does not see itself seeing. The other action of sight occurs inasmuch as, after the impression on the organ, it judges the organ’s perception of the sensible – even after the sensible has gone. In this way sight senses not only color, but also the seeing of color.

The account is similar, but notice, as in the earlier text from *InDA* III.2 (see note 26), that Aquinas seems to be saying the external sense can itself engage in second-order perception. Again, for the reasons described in notes 25 and 26, I would deny that this is what Aquinas means. And I would say the same for other passages (such as *QDV* 10.9c) where Aquinas seems to attribute second-order perception to the external senses. (Here I am answering a question I posed in *Theories*, ch. 4, note 60.)

- 29 Or, perhaps, it can be merely *sensation* and not full-blown conscious *perception* (reserving ‘perception’ for a higher level of cognitive processing, beyond the level of mere sensation). Aquinas, however, speaks not just of sensation but also of perception occurring in the external senses. In 78.3c, for example, he says that what the external senses “perceive per se” is the external quality that makes an impression on them.

The verb *percipio* does not, for Aquinas, have the strong implication of consciousness that it has for us. Sometimes he uses that word according to its core meaning, as a mere reception. (See, e.g., *InDA* III.1.88, III.10.102.) If anything, *percipio* entails fewer psychological commitments than does *sensio*. So it might mean very little when Aquinas says that the external senses are perceptive. I speak indifferently, throughout, of perception and sensation.

- 30 Regarding second-order perception, Locke writes that “consciousness is the perception of what passes in a Man’s own mind” (*Essay* II.i.19). Eysenck (1990) holds that “the term [consciousness] refers to awareness of our own mental processes . . .” (p. 84). On the comparative operation, see Flanagan (1992), p. 135, and also E. R. John, as quoted in Dennett (1987), p. 162:

[Consciousness is] a process in which information about multiple individual modalities of sensation and perception is combined into a unified multidimensional representation of the state of the system and its environment, and integrated with information about memories and the needs of the organism, generating emotional reactions and programs of behavior to adjust the organism to its environment.

The reference to “memories and the needs of the organism” fits nicely with common sense’s role in apprehending phantasms, although this point will have to wait until §9.3.

- 31 Regarding Aristotle, see, e.g., Kahn (1966), Kosman (1975), Modrak (1987), who reports that “a consensus seems to be developing” (p. 133).

Regarding Aquinas, Ryan (1951) holds that “the first purpose of the common sense is to give the individual consciousness of the acts of his external senses” (p. 141). Suttor, in notes to his translation of *Q78*, speaks of “a ‘common’ sense, or sense-consciousness” and says that its “role of establishing the unity of consciousness means that all other sense faculties are in a manner subordinate to it . . .” (pp. 138n–39n). Caramello writes that “the cognition of an external sense . . . is unconscious, absolutely speaking, and conscious only relatively speaking” – relative, that is, to the operation of common sense (Thomas Aquinas 1950, p. 582b). According to Putallaz (1991b), “*Le sens commun rend possible une conscience sensorielle de nos sensations*” (p. 49). Tellkamp (1999) remarks, “*erst durch den sensus communis wird der Übergang von schlichter Sinnesreizung zu Sinneserkenntnis vollzogen*” (p. 251).

- 32 The literature on Aristotle tends to avoid these issues by denying that there are two separate actions involved; see, e.g., Kahn (1966), p. 30: “Sensation and the awareness of sensation are simultaneous (and totally identical) acts of the same faculty.” Like so much else in Kahn’s paper, this is a philosophically attractive view, and one that finds support in Aristotle. But 78.4 ad 2 (as quoted earlier) makes it quite clear that it is not Aquinas’s view.

- 33 Earlier, Aquinas had remarked that “the principle of vision is internal, next to the brain, where the two nerves coming out of the eye join together” (*InDSS* 4.92–94 [5.64]). In *InDSS* 4.277–84 [5.76], as noted earlier, Aquinas describes sensory power as first being distributed to the brain, and then to the special sensory organs. So the common sense is located in the brain (perhaps ultimately in the heart) and spreads its influence outward, to this “principle of vision.”

Roughly this view was standard among Aquinas’s contemporaries. Albert the Great, on the authority of Damascene and “Gregory of Nyssa” (actually, Nemesius), located the visual power in (a) the anterior part of the brain, (b) the crystalline humor of the eye, and (c) the optic nerve and “visible spirit that runs through it” (*Summa de homine* 19.1 ad 3).

Albert actually raised the question of whether the external senses by themselves are incomplete. He replied that they are incomplete only inasmuch as with a single external sense one is cognizant of only a single set of sensible qualities (*Summa de homine* 34.2; pp. 311b, 313b–14a).

John Duns Scotus would likewise contend that the visual power is not within the eye itself, but at the conjunction of nerves behind the eye (*Ordinatio* I.3.1.4, art.2; John Duns Scotus 1962, p. 112).

- 34 See, e.g., the account in Flanagan (1992), p. 171: “how these coherent perceptions arise. . . . how all this individually processed information can give rise to a unified percept. The answer would be simple if there were a place where all the outputs of all the processors involved delivered their computations at the same time, a faculty of consciousness, as it were. But the evidence suggests that there is no such place.”

Chapter 7. *Desire and freedom*

- 1 The same *might* be said of the human cognitive capacities. In *Theories*, pp. 50–60, I argue that the capacity for cognition consists simply in being well suited to receive the forms of other things. The senses and intellect are special only in being spectacularly well suited to receive such forms. But since everything that is acted on receives a form, one might take the view that all things are, if only minimally, cognitive.

On this view, there is a certain pleasing symmetry between the cases of appetite and cognition. But (as I acknowledge in *Theories*) this isn’t how Aquinas officially describes the situation. He explicitly maintains that all things have appetites, while explicitly denying that all things are cognitive.

- 2 In fact, the case of Buridan’s ass – which has not been found in John Buridan’s own writings – seems to have been formulated by others as a *reductio* of Buridan’s account of voluntary action (see Zupko 1998a). The case arises when the will is described as acting *only* on the judgment that one choice is preferable to another. In cases where two choices are precisely equal in desirability, as in the case of the two piles of hay between which Buridan’s ass is stuck, no choice would be possible.

- 3 Aquinas uses the example of a stone in *QDV* 22.1c: “he who gave weight [*gravitatem*] to the stone inclined it toward being carried downward naturally.” But this particular example introduces unnecessary complications, because premodern philosophers misunderstood the nature of gravity: they wrongly supposed that being heavy gives things an internal inclination to move downward. Aquinas’s understanding of fire is likewise outmoded, but it seems at least less misleading to think of fire’s tendency to spread as an intrinsic property.

Aquinas does not describe fire as growing; he instead uses the more roundabout expression “generating that which is like it.” As I argue in §3.2, fire lacks the sort of unity that is required for genuine growth. Only living things grow.

- 4 Aquinas takes God’s hands-off policy to extend to both our volitional and our cognitive capacities. In §10.2 we will see how the cognitive side of this claim led Aquinas to clash with his contemporaries over the theory of divine illumination. In contrast with his opponents, Aquinas argues that God gives human beings the capacity to achieve understanding on their own.

The most prominent exception in this area is the doctrine of grace. Only the Pelagian – that is, only a heretic – could suppose that human beings are sufficient on their own for achieving salvation. Hence Aquinas concludes that “without grace a human being cannot merit eternal life” (12ae 109.5c).

- 5 See Pasnau (2001) for further discussion of the broader medieval and early modern context.

In discussing Spinoza’s argument, Jonathan Bennett assumes that the proponent of final causality will take the concessive approach described above (Bennett 1984, p. 217). He refers to the bolder reply I attribute to Aquinas as “a minuscule target.” (Might the target look somewhat larger from the proper historical perspective?) This leaves Bennett with quite a puzzle, since Spinoza’s objection is obviously irrelevant to the concessive approach to final causality; Bennett’s solution is to find the resources from elsewhere in the *Ethics*

to block even that seemingly uncontroversial concessive account. All of this is characteristically ingenious and interesting, but it seems to me that Spinoza's objection deserves more credit. (Or should I say *less credit*? It is often hard to know which to say, when reading Bennett.)

- 6 But see Leibniz's defense in *Discourse on Metaphysics* §19, and the post-Darwinian arguments of Richard Swinburne (1968) and Richard Taylor (1974), pp. 112–20.
- 7 Elsewhere Aquinas says much the same in arguing that intellect entails will (see, e.g., 19.1c). This parallels the method of 78.3–4, where Aquinas derives the number and kind of senses from considerations about what properly functioning animals need to have (see §6.2).
- 8 "What moves itself is divided into mover and moved. Appetite is a mover that is moved by intellect, phantasia or sense, all of which make judgments" (*SCG* II.48.1243). Cf. 80.2c: "something apprehended that is the object of appetite is an unmoved mover, whereas appetite is a moved mover." For further discussion of the need for self movers to have two parts, see *QDV* 24.1c.

Just as one might raise questions about why plants are alive, so one might question why plants lack cognition and hence lack animal appetites. After all, flowers open up during the day, and leaves open and close depending on light and moisture. Such behavior seems to require perceiving the environment, and hence to involve changeable animal appetites rather than merely natural appetites. (I am indebted to Matt Roberts for this point.) Aquinas would want to deny that plants have genuine perception. Though the details here would require a separate study, it is helpful to notice that the opening of flowers in sunlight might equally be compared to the shrinking of a metal in the cold. (Many thermometers work on this principle.) We don't suppose that the metal perceives the cold, and equally we shouldn't suppose that plants perceive the sun. Of course, there might be borderline cases where we don't know whether to call something an animal or a plant. It shouldn't be surprising if Aquinas's taxonomy proves insufficient, on its own, to handle all the cases a modern biologist might raise.

- 9 Elsewhere (*QDV* 24.2 ad 3, *QDM* 6 ad 22) Aquinas uses 'freedom of action' in another sense, so that to have freedom of action is to be able to act free from compulsion or restraint. (This is closer to our notion of political freedom.) Not even human beings are always free in that way (see 83.1 ad 4; 1a2ae 6.4c).

The present remarks on other animals hold just as well for the sensory appetites of human beings. We too cannot not have certain sorts of sensory desires. It is only in virtue of our rational part that we can take control of our lives, and hence be considered free. Of course, if our rational part were not able to control our sensory appetites, then this freedom would be sharply limited, perhaps even eliminated. But for Aquinas it's a pathetic fact about human beings in this life (and a crucial fact to keep in mind when thinking about morality) that we have only a "politic rule" over our sensory appetites. See §8.5.

- 10 Aquinas has a complex and sophisticated theory of action, involving many more steps than I here have occasion to discuss. This theory is not much elaborated in the Treatise, but is discussed in detail in 1a2ae 6–17. For discussion see Donagan (1982); McInerney (1992); Westberg (1995); Finnis (1998), ch. 3.
- 11 See also *QDV* 24.5, where Aquinas argues against the suggestion that free decision might be more than one capacity.

Aquinas goes so far as to propose that judgment itself be viewed as an appetitive operation (83.3 ad 2), although this flies in the face of how he standardly speaks of judgment. In an earlier treatment, in *QDV* 24.6c, Aquinas tries a different line of argument. He grants that judging is an operation of reason, but denies that it follows that freely judging is also an operation of reason. It is the will, he says, that makes us free in our judgments. One can see why he dropped this approach. If the will is not responsible for the act of judgment, how can the will be responsible for giving judgment some new intrinsic quality – making it free?

- 12 Aquinas is nevertheless willing to say that we have free will. For although we cannot *choose* to be unhappy – "no one can *not* will to be happy, or will to be miserable" (II *SENT* 25.1.2c) – and although this natural inclination is given to us by God, still we do *will* hap-

piness freely. This ultimate end is not contrary to our wills, but accords with what we want: hence “the necessity of natural inclination is not incompatible with freedom” (*QDV* 24.1 ad 20).

This broader conception of freedom reinforces what Aquinas says about other animals. They too act from natural inclination, and they too cannot help but act as they do. Yet animals are still free, though not free in their judgments and choices.

- 13 See §8.2 for further discussion of the relationship between goals and ends. For a detailed analysis of Aquinas’s motivational theory, see MacDonald (1990), (1991).

It is noteworthy that the conclusion of 59.3c (as just quoted) is that having an intellect entails having free decision. One might suppose that the most Aquinas establishes there is that having an intellect is a *necessary* condition for free decision. But he embraces the stronger conclusion that having an intellect is a *sufficient* condition. He feels entitled to this, I believe, because he thinks there is simply nothing more to free decision beyond the capacity to reason universally. It is not as if freedom requires some further power to break free from the causal and motivational forces that surround us. (More on this in the next section.)

- 14 This sort of move is made, in effect, by Henry of Ghent, when he argues that immaterial capacities are capable of violating basic metaphysical principles, such as the rule that “nothing moves itself through itself” (*Quodlibet* X.9, as quoted in Lottin 1957, p. 307 n.1).
- 15 A compatibilist need not believe in determinism, only that freedom is compatible with various forms of determinism. I am not the first to propose reading Aquinas in this way. Recently, Anthony Kenny has taken this view (Kenny 1993, p. 77). Some of Aquinas’s near contemporaries also developed his views in this direction, notably Thomas of Sutton and Godfrey of Fontaines (see Lottin 1957, pp. 304–77). Still, a libertarian reading remains orthodox. See, e.g., Lonergan (1971), Gallagher (1994), Stump (1997).

Although the free will debate standardly focuses on the possibility of determinism, that focus is misleading. Modern physics makes it seem unlikely that determinism is true; still, the problem of free will can be effectively reformulated in terms of probabilistically determined events, or in terms of the random motion of particles, etc. (see Dupré 1993, sec. III). It is not easy to see how any of these possibilities leaves room for freedom. Compatibilists, for their part, are best understood as saying not that free will and determinism are compatible, but that free will is compatible with perfectly ordinary and unmysterious causal stories of human action – that is, compatible with what physics tells us about the world.

- 16 There has been controversy over whether Aquinas changed his mind about *liberum arbitrium*. For discussion and references, see Torrell (1996), pp. 244–46, and Westberg (1994a), who persuasively argues against a change of view. And see 1270, p. 239. As I indicate below, the Treatise omits an important aspect of Aquinas’s full view. But I do not think the theory changed in the three years that lie between 1a and 1a2ae.
- 17 *In II Sent.* Q57 ad 4 (341). I discuss Olivi’s views at greater length in Pasnau (1999b). See also Normore (1994), Dumont (1995), MacDonald (1995), Putallaz (1995). For the broader context of the reaction to Aquinas’s theory, see Lottin (1957), pp. 243–339.

For more recent libertarian accounts, see, e.g., van Inwagen (1983), p. 8. I take the term ‘dual power’ from Graham (1993). Libertarians commonly speak of a principle of alternate possibilities. Frankfurt (1969) makes an influential argument that being able to do otherwise is *not* a necessary condition for being morally responsible. Stump (1990), in drawing on Frankfurt’s argument, concludes that Aquinas does not require dual power for free decision, a view I share (as becomes most clear in §7.4.4).

- 18 There is a textual difficulty here. In the Latin phrase, *liberum est quod sui causa est*, it is unclear whether *causa* should be read in the nominative or the ablative. As a translation of Aristotle, it should be the latter: *causà sui* translates *hautou heneka* (for the sake of oneself). Aquinas shows himself well aware of the correct meaning in his later commentary on the passage (*InMet* I.3.58), and I hesitantly assume he knew as much when writing 83.1 obj. 3. But in ad 3 he seems throughout to use *causa* in the nominative. The translation I propose (“by cause”) is awkward, but accounts for the literal meaning while at the

same time staying close to the key notion of causal control. (Kretzmann 1999 renders *causa sui* as “because of itself” (p. 246). This is an elegant solution if the reader makes the etymological connection.)

- 19 Kenny (1993) takes the first, compatibilist reading of this passage to be the only available reading, and so concludes solely on the basis of this that “Hence, Aquinas appears to believe that freedom is compatible with some sorts of determinism” (p. 77). I believe that the passage admits perfectly well of either reading. And although I agree with Kenny that Aquinas’s account of freedom is compatible with some sorts of determinism, I am reluctant to affirm that Aquinas does in fact believe human choices are causally determined by God. Even if Aquinas’s theory of *liberum arbitrium* is consistent with such a view, I do not know whether the rest of his theology and philosophy (such as his theories of grace and divine justice) could be squared with it. This is a larger issue than I am prepared to address at present. For discussion of Aquinas’s views on divine causality, see Loneragan (1971), pp. 76–80, and de Murali (1991), pp. 331–51.
- 20 See Kretzmann (1997), pp. 211–12. Stump (1997) also stresses that the intellect does not exercise efficient causality on the will, and she uses this point to assert that Aquinas is not a compatibilist. My own views have been influenced by her argument, but I’ve come to think that she draws the wrong conclusion.
- 21 See, e.g., Garrigou-Lagrange (1936), p. 290: “To be master of one’s act, it suffices to be able to act or not to act, to go into or refrain from action.”
- 22 Though I refer to these as higher-order volitions, the term might be misleading since these volitions do not consist of willing to will something. In §7.3, we did see Aquinas introduce strictly higher-order judgments: judgments about judgments. In the present case, one wills an end, which causes one to will the means: “if someone wills an end with one act, and with another act wills the means toward an end, then willing the end will be for him the cause of willing the means toward the end” (19.5c). Still, these volitions are higher-order in that they are more general and governing.

It is not clear to me that Aquinas would regard strictly higher-order volitions as intelligible. Certainly, he would not countenance a theory on which one might will to take medicine, and thereby bring about a second, effective volition to take medicine. That would lead to an absurd result: “that the will is in potentiality and actuality in the same respect” (*QDM* 6c). Would a higher-order volition (e.g., to will oneself to will taking medicine) be any better? I suspect that this would either collapse into the sort of absurdity Aquinas wants to avoid, or would get spelled out in something like Aquinas’s way, in terms of willing the end, and thereby being moved to will the means.

Augustine raises similar worries about higher-order volitions at *Confessions* VIII.ix.21 (see Pasnau 2000a, pp. 93–100). Frankfurt (1971) famously appeals to higher-order volitions to explain both what it is to be a person and what it is to be free. For a fine recent discussion of these issues, with references to the burgeoning literature since Frankfurt’s ground-breaking work, see Bratman (2000).

- 23 “The will is moved of necessity by no object, because for any object one is able not to think about it” (1a2ae 10.2c). “Only that good which is perfect . . . is such a good that the will cannot not will it. This is happiness. All other, particular goods, insofar as they fall short of some good, can be viewed as not good, and in this light they can be repudiated or embraced by the will” (1a2ae 10.2c). See also II *SENT* 25.1.2c. For a vivid discussion of the role the will can play in directing intellect, see Stump (1998c).

It seems to me that Hause (1997) neglects the force of these considerations when he remarks that Aquinas speaks “misleadingly by saying that the will has control of its act” (p. 178). Donagan (1982) is similarly wrong to remark that for Aquinas “the source of the will’s freedom is . . . external [to it]” (p. 653). For an extreme intellectualist reading of Aquinas, see Bowlin (1999), who remarks that “the belatedness of will in Aquinas’s moral psychology, its ultimate dependence upon the judgments of reason, prevents this contribution from carrying any explanatory power. . . . [D]espite frequent reference to the will Aquinas does not consider it an independent cause of action, sinful or otherwise, this side of Eden” (p. 38n).

- 24 This shows what is wrong with the “safe” position of Kretzmann and Stump (1998):

The interpretation of Aquinas’s account of freedom of will is controversial. . . . However, it is perhaps safe to say that, since Aquinas emphatically denies that any volition caused by something extrinsic to the agent can be free, his account of freedom of will is not a version of compatibilism (p. 339a).

In addition to flying in the face of 12ae 9.4 ad 1, this argument would prove too much. The passage Kretzmann and Stump appeal to here (12ae 6.4) concerns voluntary action in general. But even nonrational animals act voluntarily in this general sense. So if the argument establishes that human beings are free from causal determinism, it shows the same for all animals, a view Aquinas is not likely to have maintained.

- 25 Aquinas’s implicit attitude would be defended much more explicitly by Godfrey of Fontaines in 1289. Godfrey insists that, in discussing free will, “we should not deny what is first and most certain because of ignorance and doubt about what is posterior.” One such certain principle is that nothing can move itself.

Therefore if it seems to someone that, on the supposition that the will does not move itself, it is difficult to preserve the freedom that on his view he wants to posit in the will, in the way he likes, he should not on the basis of this posterior claim proceed to deny prior and more certain claims. Rather, on account of the certainty of the prior claims that he has to suppose, he should study how to make these compatible with the posterior claims (*Quodlibet* VI.7 [p. 170]).

In other words, rather than abandon basic principles of metaphysics, we should reconsider our assumptions about what freedom requires.

Scotus would later argue in great detail against this alleged first principle of metaphysics. See King (1994b) for a careful analysis.

- 26 Criticisms of this form have often been made against Frankfurt’s (1971) use of higher-order volitions. (See, e.g., Watson 1975.) Ryle (1949), p. 67, uses this form of argument to argue that the concept of *volitions* cannot be used to account for free will.

MacDonald (1998), after making similar points, suggests that Aquinas’s account of higher-order judgments must eventually terminate in an uncaused, undetermined judgment. Though I find it unnecessary to appeal to such metaphysical oddities, the account deserves serious attention as an alternative to will-based libertarian readings of Aquinas.

- 27 “Sensory appetite is not necessitated toward a thing before it is apprehended as being enjoyable or useful. But once it is apprehended as enjoyable, the appetite is necessarily drawn toward it. A brute animal, seeing something enjoyable, cannot *not* desire [*appetit*] that thing” (*QDV* 25.1c). Aquinas goes on to contrast the case of the will, which “is not necessitated with respect to this or that thing – no matter how much it is apprehended as good or useful.”
- 28 I have not found Aquinas offering any satisfactory account of moral responsibility. Here is one place where he might make an attempt. He might insist that we hold ourselves and others responsible for our choices insofar as those grow out of our character and entrenched dispositions. In the final analysis, even these features of us are the product of abilities and circumstances that are not under our control. But we are nevertheless willing to take on our most imbedded features as our own, assuming responsibility for them. In the end that is who we are; there is nothing deeper to which we might appeal.

This will not seem satisfactory to the libertarian. But at some point the compatibilist must simply concede that not all of our intuitive notions of responsibility can be coherently defended.

Chapter 8. Reason and temptation

- 1 Kenny (1975) reaches a similar conclusion about Aquinas’s vulnerability to Ryle’s attack: “All that Aquinas’ language commits him to is the truism that if you do something voluntarily you do it because you in some sense *want* to do it” (p. 24). But Kenny concedes that the will is not a faculty, not “a set of capacities.” Our intellect, for instance, gives us the capacity to do math, but our will simply enables us to do so “voluntarily or intentionally.” So the will is at most a second-order capacity (p. 4). I think that Kenny is wrong

to concede even this much. In acquiring various capacities, we develop the ability to make choices quickly and reliably. Playing basketball, playing bridge, teaching, debating – all these activities require us to make the right choices without hesitation; this is as much a volitional skill as an intellectual one.

For an instance of modern scruples regarding the will, see Peter van Inwagen's caution at the start of his *Essay on Free Will* (1983) that "my use of the term ['free will'] is not meant to imply that I think there is such a "faculty" as "the will"" (p. 8).

- 2 The main text ignores an important complication. As we saw in §7.2, Aquinas wants to leave room for Aristotle's view that nonrational animals can in a sense act voluntarily: "in an incomplete sense, the voluntary applies even to brute animals" (1a2ae 6.2c). The necessary connection between the will and the voluntary must therefore be understood to apply only to actions that are completely voluntary: "in the complete sense, the voluntary applies only to rational natures" (ibid.). It seems that Aquinas regularly ignores or forgets the weaker sense when discussing the voluntary.

This complication might make trouble for Aquinas. As one reader has suggested to me, it seems that Aquinas leaves room even for human actions to be not the product of will and yet be (weakly) voluntary. (If this holds for animals, it should hold for us.) But then it looks like the tie between the will and the voluntary really has been severed, even in our case. The kind of case where this would matter is the case where the passions give rise immediately to an action, without any rational consent. Aquinas discusses such cases, and remarks – just as he should – that "for such people the same account holds as for brute animals" (1a2ae 10.3c). Hence such actions would be only weakly voluntary, and hence they would not be subject to blame (1a2ae 6.2 ad 3) – though there might be aggravating circumstances for which blame was deserved. This is to say that Aquinas would take the hard line that such weakly voluntary actions are not *really* voluntary in the usual sense, the sense that implies moral responsibility. In general, almost all of what Aquinas wants to say about the voluntary applies only to the completely voluntary. His weaker notion of voluntary gets set aside as a minor technicality. Hence the main text proceeds without attention to this detail.

- 3 This is clear, at any rate, for Chrysippus; other Stoics were less definite in *identifying* passion with a class of judgments. See Long and Sedley (1987), sec. 65. For Plato, see *Republic* IV 435–45; for Aristotle, see §8.3 below. Solomon (1980) offers a modern defense of the Stoic account.
- 4 Aquinas takes this remark to apply only to Aristotle's opponents, not to Aristotle's own theory (*InDA* III.14.99–118). Ross's commentary, in contrast, attributes to Aristotle's opponents "a failure to recognize that the faculty of desire is a single main faculty" (p. 312). Aquinas has other texts from the *De anima* in mind, notably III 10, 433a23–26, and III 11, 434a12–15, but their meaning is uncertain. It is easy to feel the suspicion that Aquinas's development of *voluntas* strays rather far from Aristotle's original notion of *boulêsis* as rational desire. But see **Doing away with the will?**, p. 225.
- 5 Aquinas could, if it had mattered, recast this argument so as to focus on the input side of appetite, on the differences in how those objects are conceived and represented by the senses. (This is how he seems to reason in *QDV* 25.3c; for discussion of how the various external and internal senses trigger sensory appetite, see *QDV* 25.2.) Sometimes it is simply not clear whether Aquinas is focusing on inputs or outputs. There is a certain ambiguity, often harmless, in the notion of an *object* of appetite. This ambiguity derives from a more general ambiguity in the notion of final cause. Is the final cause the thing toward which we aim, or is it our internal representation of the thing toward which we aim? (In §7.1, I argued for the former.)
- 6 As evidence of incommensurability, and hence of the irreducible distinctiveness of these two separate capacities, 81.2c appeals to two sorts of facts. First, the two appetites are often at odds with one another. Second, "the irascible serves as the champion and guardian of the concupiscible." But surely, one might protest, we could find such conflicting and supporting relationships even within the concupiscible or irascible power.

Cf. Plato, *Republic* IV 436b: "It's clear that the same one thing cannot simultaneously either act or be acted on in opposite ways in the same respect and in the same context.

And consequently, if we find this happening in the case of these aspects of ourselves, we'll know that there are more than one of them." Aquinas's distinction between the irascible and the concupiscible does stem ultimately from this famous discussion, but indirectly, via Nemesius and John Damascene (see 81.2sc). For a recent appraisal of Aquinas's distinction, see King (1998).

7 The approach might seem circular. Capacities are supposedly individuated by acts, acts by objects (77.3), and yet here I am suggesting that the proper individuation of objects is apparent only in light of differences in the acts stimulated by those objects. This would be a fatal objection if Aquinas intended to present a demonstrative argument reasoning from objects to acts to capacities. But he has no such ambition. Objects are conceptually prior to acts and capacities: we have certain capacities for performing certain acts because of the way the world is, and because of the things we need to do to flourish in the world. (Cf. §6.2 on the teleological background to his account of sensation.) Rational animals, *qua* rational, need to be motivated by reasons, whereas *qua* animal they need to be motivated by sensory stimuli. Yet it is often easier to explain how such motives differ by taking a backward perspective, by beginning with differences in the acts or capacities.

8 This is not to say that the will's immateriality supplies Aquinas with an argument for its difference from sensory appetite: that would run the argument in the wrong direction. Aquinas does, at least once, say that the will's freedom is a "sign" of the distinction between rational and sensory appetite: the former, "when it apprehends something pleasant, is necessarily drawn to it," whereas the will "is not necessitated with respect to this or that thing – no matter how much it is apprehended as good or useful" (*QDV* 25.1c). But these considerations are merely a sign. Strictly speaking, the will's immateriality and freedom are consequences to be drawn from the will's mode of operating, which is in turn a function of the different sorts of objects motivating us.

In fact, the Treatise never argues for the will's immateriality: this gets taken for granted early on as an obvious consequence of the will's intellectual character, its capacity to act for reasons. The will, like intellect, is in the soul "in such a way as to exceed all of the body's capabilities. Such capacities are consequently said to be in no part of the body" (76.8 ad 4; see also 77.8c, 79.1 ad 3). Aquinas may have felt that earlier articles, on the will in God (19.1) and in angels (59.1), dealt adequately with this issue. See also *SCG* II.60.1374.

9 On affections in God and the angels, see 20.1 ad 1 and 59.4 ad 3–4. For further discussion of the will's affections, see 122ae 22.3c and *QDV* 25.3c. Jacob (1958) contains a useful overview of the passions in Aquinas. Roberts (1992) raises a series of hard questions regarding Aquinas's conception of the relationship between sensual passion and reason.

QDV 25.1c claims that sensory appetites are triggered by two kinds of objects: those that contribute to our continued existence, and those that please the senses. The first kind produce the strongest appetites, and of these the desire for sex comes first (222ae 155.2 ad 4).

See 122ae Q23 and Q25 for a general attempt at organizing the passions (and also *QDV* 26.4–5), and see QQ26–48 for a detailed discussion of the most prominent kinds: love (QQ26–28), hatred (Q29), concupiscence (Q30), pleasure (QQ31–34), sadness and pain (QQ35–39), hope (Q40), fear (QQ41–44), audacity (Q45), and anger (QQ46–48). The broad scope Aquinas gives to passion raises a question about how he draws the line between cognitive and appetitive states. Where does the sensory perception stop, and the sensory pain or pleasure begin? Here I can only note the question.

10 Aquinas's official stance, as stated in 222ae 143c, is that continence is a part of temperance. This suggests that incontinence and intemperance should be similarly linked. But in practice Aquinas tends to separate the two.

Here '(in)continence' is being used in its philosophical, Aristotelian sense. Aquinas describes another usage common in theological texts, on which continence is the abstinence from sexual pleasures (see 222ae 155.1). Understood in this second way, continence is entirely virtuous. In the first way, it is only partially virtuous. For it would be better still to be a temperate person, the kind whose passions are never unruly (see §8.5).

- 11 One of the most notable differences here between Aquinas and Aristotle is that Aristotle denies that incontinent actions are chosen or willed (see, e.g., *EN* VII 4, 1148a9, 17). Aristotle can say this and still hold that incontinent actions are voluntary, because he has a weaker standard for being voluntary, according to which voluntary actions need not be willed (see *EN* III 2, 1111b7-10, and note 2, above).

Aquinas, in his commentary, simply follows Aristotle, without remark, in holding that incontinent actions are not chosen (see, e.g., *InNE* VII.4.92-102, 115-117 [1360-61]). Kent (1989) shows that Aquinas is careful in these passages not to contradict his own theory (pp. 213, 217). And it is easy to see how the apparent discrepancy can be minimized: there is clearly *some* sense in which the incontinent person is not doing the thing he wants.

- 12 The disposition of synderesis is parallel to our grasp of first principles in theoretical reasoning – e.g., that the whole is greater than a part. In each case the disposition is virtually innate: we see the truth of these basic principles, as soon as we grasp the concepts (e.g., *whole*, *part*). In each case this capacity is the product of agent intellect. See II SENT 24.2.3, and the discussions in §§10.2 and 10.5.
- 13 This point has its roots in Aristotle's distinction between simple incontinence, which concerns sensory pleasure, and incontinence in the extended sense, which might concern wealth, honor, etc. (*EN* VII 4, 1147b20-1148a13). So another way of describing this first misunderstanding of Aquinas's theory is to say that commentators have unwittingly been using 'incontinence' in the extended sense, even though Aquinas takes care to speak of incontinence only in the first, simple sense.

The clearest discussion of acting against reason occurs at 12ae 77.2c, but see also *QDM* 3.9c, and the earlier treatment in II SENT 24.3.3c. Aristotle's discussion occurs at *EN* VII 3, 1146b32-1147a18. The literature on *EN* VII 3 is large and complex (see Barnes 1995, pp. 369-70), which makes it hazardous to go beyond the cautious claim that Aquinas is, to some extent, following Aristotle.

- 14 The natural law is truly universal only for the most general truths, such as that evil should not be done (see II SENT 24.2.3c). The descent from universal to particular propositions is gradual, and Aquinas does not attempt to specify at exactly what point error becomes possible. But the example here shows that he thinks it is possible for someone to go wrong at a fairly high level. Elsewhere (12ae 94.4c) he relates Julius Caesar's claim that the German barbarians were unaware that theft is wrong. But cases of this sort will be rare, he thinks, like birth defects.

There is dispute over just how much content Aquinas wants to give the first principles of synderesis, and one might object that I am giving these principles undue weight as substantive moral truths. (See, e.g., Westberg 1994b, pp. 103-6, 150-51.) But it is enough for the purposes of my argument if it sometimes happens that the intemperate agent knows dispositionally, in virtue of synderesis and the natural law, that fornication is wrong. That alone would show that acting against reason sometimes extends to intemperance.

- 15 Incontinence comes up once in 77.2 (in ad 4), once in *QDM* 3.9 (in ad 7), and is not mentioned at all in a third parallel text, II SENT 24.3.3. It is noteworthy that although each of these texts discusses Socrates's position, they do not describe him as denying the possibility of *incontinence*.
- 16 The list of those who have identified Aquinas's incontinence with acting against reason includes Reilly (1974); Davidson (1980), pp. 33-35; Kretzmann (1988); Kent (1989), (1995); Gallagher (1994), pp. 271-72; Saarinen (1994); Westberg (1994b), pp. 204-13; Bowlin (1999), pp. 42-46. The only exception I know of is Gosling (1990), pp. 71-81, who pays close attention to what he calls nonpassionate *akrasia*. He rightly notes that this kind of acting against reason is especially important in Aquinas's explanation of the fall of Satan, who knew that he did wrong, and who could not have been tempted by passion (II SENT 5.1.1).
- 17 And notice that Aquinas introduces yet another form of acting against reason when he raises the possibility of being "conquered by the suggestion of a demon." See 12ae Q80 and *QDM* 3.3-5. It was in this way, presumably, that Eve acted against reason.

- Aquinas takes the best interpretation of Romans 7 to be that Paul describes his frustrating inability to take complete control over his passions (see 83.1 ad 1) – an inability that, Aquinas believes, plagues even the saints (see §8.5). Aquinas dislikes the weakness-of-will interpretation because he sees no good way to reconcile it with Paul’s remarks that “it is no more I who do it, but sin, which dwells in me” (7,17). For Aquinas, someone who acts against reason is very much responsible for his action. For discussion, see Kretzmann (1988). Kretzmann, incidentally, notices that Aquinas’s description of the weakness-of-will interpretation cannot be made to fit within the rubric of incontinence (pp. 186–87), but Kretzmann misses the proper diagnosis of the misfit: that Aquinas’s account of incontinence is narrower than his account of weakness of will (acting against reason).
- 18 Aquinas is following *EN* VII.7.1150b19 in his account of the impetuous akratic – but when one begins to think through how Aquinas would explain such cases, dramatic differences emerge. For Aristotle, the will does not enter into the picture. And since Aristotle’s incontinent agent does not choose his action, reason might not be involved here, either. The passions themselves might directly lead to action, as Aquinas believes they do in nonrational animals (see 81.3c).
- 19 *Expositio super decem libros Ethicorum*, 121va, as quoted in Saarinen (1994), pp. 138–39. Saarinen takes Burley to be implicitly attacking Aquinas, because Saarinen takes Aquinas’s view to be that the incontinent agent is “ignorant” of the minor premise (p. 124). I cannot see any basis for this interpretation of Aquinas.
- 20 “No one can be continent unless you grant it” (VI.xi.20); “You commanded me to abstain . . . and because you provided, it was done” (X.xxx.41); “It is you who provides when what you command to be done is done” (X.xxxi.45); “The labor is beyond me until you open the way” (XI.xxii.28). For further discussion of the *Confessions* and its account of weakness of will, see Pasnau (2000a).

For a particularly clear statement of Aquinas’s account, see *InDA* III.16.97–122, where an obscure text from the *De anima* gets interpreted in terms of appetites controlling other appetites.

- I have discovered that Kenny (1975) offers this same kind of account of weakness of will (pp. 105–7), although he doesn’t ascribe it to Aquinas.
- 21 Human beings possesses an analogous capacity within memory. Aquinas speaks of this as recollection (*reminiscentia*), “which inquires as if syllogistically into memories of past events, in light of individual intentions” (78.4c). Cf. Aristotle, *De memoria* 453a5–14.
- 22 Here are some more details on this intellectual quasireflection back to particulars. The passage from *InDA* continues,

For it has cognition of the nature of the species, the quiddity, by *directly* extending itself toward it, whereas it has cognition of the individual itself by a kind of *reflection*, insofar as it returns to the phantasms from which the intelligible species are abstracted (III.8.182–186).

In its direct mode, the intellect works through phantasms to apprehend the nature of an individual. But there is another mode of cognition, an indirect reflection on phantasms. Such reflection shouldn’t be confused with our intellect’s continual turning (*conversio*) toward phantasms, which occurs even when we are thinking directly about a thing’s abstract nature (§9.4). Reflection is an occasional activity aimed at particulars. Here the intellect, after considering intelligible things, “reverts back to considering its act and intelligible species . . . , and thus it comes to consider the phantasms and singular things that the phantasms are concerned with” (*QDA* 20 ad 1 sc; see *QDV* 10.5c). So first the intellect grasps the thing’s nature, then it turns toward its own act and its intelligible species, then it comes to phantasms, then finally it reaches the particulars. I leave it to others to defend the plausibility of so convoluted a process.

See §11.2 for further discussion of reflection, in the context of self-knowledge. For further discussion of the cogitative power, see Klubertanz (1952), who notices many of the points I have made here and traces the history of the doctrine from its ancient sources through the whole of Aquinas’s corpus.

- 23 Cf. *QDV* 22.9 ad 3: “Someone incontinent is not said to be ‘conquered by passions’ [cf. *EN* VII] as if those bodily passions forced or affected the will necessarily. Otherwise

someone incontinent ought not to be punished, because one should not punish what is involuntary. But someone incontinent is not said to act involuntarily, according to the Philosopher in *Ethics* III; rather, someone incontinent is said to be conquered by passions inasmuch as he voluntarily yields to their impulse.”

- 24 Aquinas's account of why some people have stronger passions than others appeals to two kinds of circumstances that are, to some extent, a matter of luck (22ae 155.4 ad 2). First, differences in the body's natural complexion make for differences in the strength of a person's concupiscent desires. Second, the greater presence of opportunities to satisfy one's desires actually inflames those very desires. The first would seem largely out of one's control, although perhaps subject to some influence through diet and exercise. The second is partly under one's control – the monastic lifestyle being one extreme attempt to limit such opportunities. But unless one takes some such extreme measures, there is always the risk of unforeseeable circumstances that will provoke unwanted passions. *Why did that student have to sign up for my class?*

Bowlin (1999) argues in detail that such matters of chance play a central role in Aquinas's ethical thought.

- 25 Nussbaum would not grant this point. She distinguishes between theories that treat the emotions as mere bodily feelings, without cognitive content, and theories that take cognitive content to be a constitutive part of emotion. She puts Aristotle into the latter category, and dismisses the first type of theory as “relatively superficial” (1990, p. 386). By dividing the territory in this way, Nussbaum at least leaves out important alternatives, and possibly distorts the entire issue. Aquinas, for one, would fall into neither camp: he does not believe that the emotions are merely bodily feelings, but what he would add is not a cognitive component, but an *appetitive* component. Anger is not just the heating of blood around the heart, but also the appetite for revenge (see §8.3). Aquinas is simply following Aristotle here (*De an.* I 1, 403a30). So we should wonder whether Nussbaum can possibly be right in saying that Aristotle gives the emotions a cognitive component. And if the emotions are appetitive rather than cognitive, then in what sense are they “modes of vision, or recognition”?

For an interesting and detailed discussion of the role Aquinas's passions play in a virtuous life, see Murphy (1998), ch. 5.

Chapter 9. Mind and image

- 1 Aquinas refers to sensation per accidens in 78.3 ad 2, primarily in order to make it clear that the common sensibles are sensible per se rather than sensible per accidens (see §6.3). He refers to it again in 85.6c, there in order to stress that sensory infallibility extends only to the proper sensibles (see §6.3), not to the common sensibles and certainly not to the per accidens sensibles. He refers to it a third time, in 87.1 ad 1, by way of clarifying the way in which the mind knows itself per se rather than per accidens (see §11.1). The distinction can be viewed as just a special case of his more general distinction between actions that are per se and actions that are per accidens (see 76.1c).
- 2 So in this sense full-fledged human perception depends on the intellect's conceptual framework. But it is not right to suggest that genuine perception requires that the intellect be involved directly in the process. I have gotten this wrong in the past, in remarking that “it is intellect that gives conceptual form to our perceptions. . . . To grasp that the object is red, one needs the concept of *red* . . .” (*Theories*, p. 269). This is at least misleading, inasmuch as it ignores the role of the cogitative power. Stump (1998b) is likewise mistaken when she remarks, “But for Eurykleia to see what is presented to her vision as a man requires what Aquinas calls the first operation of the intellect. . . . Neither Eurykleia's senses alone nor her senses combined with phantasia can recognize *what* it is that she is seeing” (pp. 288–89).
- 3 See also *InPA* I.1.33–50 [§4], *InPH* I.1.1–8, *InDA* III.11. There is at least one further operation of intellect that deserves attention in Aquinas's scheme, the operation of forming a mental word (*verbum*). For discussion of this, see §10.5.

On reasoning as contrasted with the intellect's initial direct operation, see 79.8c. At 79.10 ad 3, Aquinas offers a somewhat different breakdown of the intellect's operation, but he does so by way of explaining Damascene's terminology. Thomists have struggled perennially to reach a definite understanding of the different stages of intellectual operation. For a taste of the complexities involved, see Durbin's appendix 3 to Thomas Aquinas (1968).

- 4 Averroes, in his discussion of sensation per accidens (*De anima* II.64.35–37), does describe a case where we discover that a person is still alive. Klubertanz (1952), p. 200, stresses the parallel. But although Aquinas must have found the parallel satisfying, it is clear from other passages where he uses this same example (12.3 ad 2; IV *SENT* 49.2.2c) that his model was Augustine (*City of God* XXII.29). And Augustine, for his part, was clearly thinking of our ordinary tacit assumption that the people around us are just as alive as we are.

It is controversial whether Aristotle gives the intellect a role in sensation per accidens (or incidental perception, as it tends to be called in the literature on Aristotle). See Kahn (1992), pp. 367–68, for a reading of Aristotle that is quite similar to the position Aquinas takes. But cf. Everson (1997), p. 228. Aquinas clearly does differ from Aristotle in giving a major role to the cogitative power; here he was indebted to medieval Islamic philosophers, in particular Averroes (*Colliget* II.20 [f.17va] and *De anima* III.6 [p. 416]).

- 5 One might suggest, focusing on Aquinas's examples, that the intellectual cases are propositional, the cogitative cases nonpropositional. But this would be doubly wrong. First, some intellectual cases will consist in the first simple apprehension of a quiddity, which is clearly nonpropositional. Second, the cogitative power itself has the capacity to "join individual intentions in the way that universal reason joins universal concepts" (*InDA* II.13.205). So this appears to be in some sense propositional, although the terms of the proposition will refer to individuals.
- 6 Aristotelian scholarship is divided on whether per accidens (incidental) sensation is a kind of sensation. Modrak (1987) gives an affirmative answer (pp. 69–70), but says that she's in the minority. For a negative answer, see, e.g., Block (1960), p. 94.

For a modern argument against describing such sensation as genuinely sensory, see George Berkeley, *Three Dialogues*:

When I hear a coach drive along the streets, immediately I perceive only the sound; but from the experience I have had that such a sound is connected with a coach, I am said to hear the coach. It is nevertheless evident, that in truth and strictness, nothing can be *heard* but *sound*: and the coach is not then properly perceived by sense, but suggested from experience (First Dialogue, pp. 167–68).

It seems to me that Aquinas's analysis can be made to support Berkeley's claim here.

My understanding of seeing as, as something that occurs constantly in ordinary perception, has not seemed right to everyone. Wilkerson (1973) supposes that "seeing something as ϕ entails that it is *not* ϕ " (p. 484). I disagree. What is true in this remark is that if something is ϕ then we do not standardly speak of seeing it as ϕ . But this linguistic point has no bearing on whether the psychological phenomenon is the same.

- 7 The Latin text, as we have it, presents a complication. It reads "*video aliquem loquentem vel movere se ipsum*," when what it should read is "*video aliquem loquentem vel moventem se ipsum*." *Movere* suggests "seeing that he is moving," which would itself be a case of sensation per accidens, obscuring Aquinas's point. Some manuscripts do in fact have *moventem*, and so one might simply adopt that as the correct reading.
- 8 There is no doubt more to Wittgenstein's argument than I have allowed for in this paragraph. Later he remarks, "Is being struck through plus thinking? No. Many of our concepts *cross* here" (p. 211). One might develop this remark by stressing the variety of ways in which *seeing as* can occur, not all of which appear conceptual (see Budd 1987). But Aquinas's theory has additional resources to account for (at least some of) such cases. When we see an object as similar to another object, we may be using the external senses and at the same time be exercising memory or imagination. When we hear music as having a certain emotional content we may be engaging the estimative power. Such accounts will

look “primitive” (see *Brown Book* §17) only on the assumption that the two faculties in question must each produce a different experience. But the unity of the experience is no guide at all to whether the experience is produced by a single faculty. As we will see in §11.3, it is a virtue of Aquinas’s methodology that his thinking about the soul is not dictated by such introspective evidence. And we have already seen an instance of this same reasoning back in §6.4, where consciousness was understood to be diffused throughout our sensory and intellectual powers.

- 9 See §10.3 for further discussion of the dubious links between (1) materiality and particularity and (2) immateriality and universality.

I haven’t found a blanket endorsement of the claim that phantasms have strictly material causes, but Aquinas does say that this is *sometimes* the case: “The appearances of imagination are sometimes caused in us by a change in location of the bodily spirits and humors” (111.3c); “The appearance or representation of sensible species preserved in the internal organs can be brought about through the local motion of bodily matter. . . . [T]he appearances of dreams [occur] as a result of the natural local motion of spirits and humors . . .” (*QDM* 3.4c). For more general evidence identifying the sensory processes as physical processes, see §2.3.

Kenny (1969) plausibly criticizes Aquinas for overstating the similarities between phantasms and sense impressions. He points out that one can have a mental image that is not the image of a particular: “I cannot see a man who is no particular colour, but I may have a mental image of a man without having a mental image of a man of a particular colour” (p. 294).

- 10 Klubertanz (1953), although aware that Aquinas attempts to give a unifying account, nevertheless remarks, “In the Latin translations of these authors [Avicenna and Aristotle] the word *memoria* would thus be an equivocal term” (p. 260).

For Avicenna on the two treasuries of phantasms, see *Liber de anima* I.5 (89–90), IV.1 (8): “That which sense apprehends is called a form, and that which the estimative apprehends is called an intention. Each of these has its own treasury [*thesaurum*].” Avicenna’s names for the various internal senses is, however, confusingly different from Aquinas’s.

- 11 See 3.222–27 and 2.180–86: “It belongs to different principles to receive or to conserve (a) a form received through sense and (b) some intention not apprehended through sense, which the estimative power perceives even in other animals, whereas memory retains it. To this latter power it belongs to remember a thing not absolutely, but as it has in the past been apprehended by sense or by intellect.”
- 12 Aristotle’s readers dramatically disagree over the role they attribute to this faculty. Some have argued that phantasia is responsible for *seeing as* (see, e.g., Nussbaum 1978); others limit phantasia to nonstandard sensory images such as dreams (see, e.g., Schofield 1978). Wedin (1988) denies that phantasia has an independent function. He regards it as a dependent capacity that contributes images and concepts to both the senses and reason.
- 13 Kenny (1993), pp. 37–38 (cf. Kenny 1969, pp. 293–94). He cites 74.6 [= 84.6 ad 2?] in defense of the first claim, and gives no citation for the second. He should have cited *InDA* III.5.106–7 and III.6.100–3, the latter of which speaks of “the movement of phantasia occurring at the same time as the movement of sense.” And see *InDA* III.16.20–27, where Aquinas explicitly recognizes Aristotle’s broader use of ‘phantasia’ to cover any case where things appear a certain way. I suspect, however, that Aquinas’s discussion of phantasia in *InDA* is distorted by the commentary format – see my introduction to Thomas Aquinas (1999), pp. xviii–xxi.

Brennan (1941) takes a view like Kenny’s, but without any real argument. For a more recent and much more persuasive defense of phantasia as the locus of conscious sensation, see Stump (1998a). She uses evidence from *InDA* to argue that the external senses do not produce conscious experience, and that phantasia is what “produces the conscious experience which is a component of ordinary sensing” (p. 378). Stump (1999) reiterates the claim, comparing someone with sensible species but nothing more to someone suffering from blindsight. “Visual information would have been received by him, but he wouldn’t have conscious access to it” (p. 171). This leads her to suppose that Aquinas’s account faces a general problem of how to differentiate perceiving from imagining or remembering (pp.

176–78). On my view this is not a problem, because the phenomenal vividness of perception is directly supplied by the activity of the external senses. (See §6.4 for discussion.)

- 14 This is not an isolated text: see also *QDM* 16.11c and 12ae 80.2c. The inspiration seems to be Aristotle's remarks at *De somno* 460b28–462b11. Admittedly, there are passages that give a different impression. *ImDMR* 3.196–97 says that the imagination is what “apprehends phantasms.” *QDV* 1.11c holds that “the proper sense apprehends the sensible species when the object is present; the imagination apprehends the sensible species when the object is absent.” These passages might be taken as meaning merely that the imagination *grasps* phantasms (in the sense of collecting and storing them). Or it may be that Aquinas was simply inconsistent on this point. (Notice that *QDV* 1.11c, as just quoted, is equally problematic for those, like Kenny and Stump (note 13), who want phantasia to play a role in ordinary sensation.)

Kemp (1996) contains a perceptive discussion of medieval theories of the internal senses. He writes, “there was general agreement that the first ventricle [of the brain] contained the common sense, integrated the input from the five external senses, and was capable of imagining both perceived and remembered images” (p. 52, my emphasis). Kemp aptly describes imagination as an *image store*.

This role for the common sense is described in the treatise of an anonymous arts master from around 1225.

Things within dreams seem to be present because forms are made to come back to the common sense. For [a form] returns to the common sense just as easily as a flame rising from a candle returns to a recently extinguished candle placed above it (Pasnau forthcoming-a).

Averroes, in his commentary on *De somno*, tells a similar story:

while asleep a human being sees and senses through the five senses without any external sense object's being there. But this happens through a motion contrary to what occurs while awake. For while awake external sense objects move the senses, and the common sense moves the imaginative power. But in sleep the imagined intention will be turned around: it will move the common sense, and the common sense will move the particular power. So it happens that someone apprehends sense objects even though they are not external, because their intentions are in the organs of the senses, and it makes no difference whether the intentions come from within or without (pp. 98–99).

Averroes thinks the motion of phantasms (here, “imagined intensions”) comes all the way back to the external senses. On this view, for example, visual images are produced in dreams by the sense of sight. Could this be Aquinas's view as well? Aquinas does think that ordinary visual experiences arise in the sense of sight, not in the common sense (or so I argue in §6.4). But dreams are not ordinary visual experiences, and perhaps not even very much like them. So I see no reason to think Aquinas would follow Averroes here.

- 15 Aquinas's account is not simply the standard medieval view, either. Henry of Ghent, for example, took Aristotle's “soul never thinks without a phantasm” in an entirely different way. For Ghent, phantasms are always required because they play the role that Aquinas attributes to intelligible species. Phantasms, suitably abstracted, serve as the actual representational forms within intellect. See *Theories*, app. B. Scotus would later criticize Henry at length, and would articulate an account of phantasms very much like the one I attribute to Aquinas:

So in fact for now the intellect does understand nothing except for when phantasia engages in its act. This is the intellect's turn toward phantasms: not that the intellect has its own action by which it is turned toward phantasms, but because in fact these capacities must operate simultaneously, phantasia with respect to the singular and the intellect with respect to the universal (*Lectura* I.3.3.1 n.300; cf. II.3.2.1 n.255, *Ordinatio* I.3.1.3 n.187, I.3.3.1 nn.343, 392, *Quaestiones de anima* 18).

- 16 The need for phantasms, then, “pertains to the imperfection of our intellectual operations” (*QDSC* 5c). Intellectually speaking, we are as blind as bats. (The comparison is Aquinas's own, but things aren't quite so bad as that might suggest. Aquinas didn't realize that bats are literally blind: he supposed that they *can* see, but only in *obscur*o.)

A telling sign of just how seriously Aquinas takes our reliance on phantasms is that he locates knowledge, considered as a disposition, partly in intellect and partly in our sensory powers. He takes this conclusion to be obvious given that “the acts of intellect through

which knowledge is acquired in the present life occur through the intellect's turning toward phantasms" (89.5c).

- 17 It is important to distinguish the turn (*conversio*) toward phantasms from the reflection (*reflexio*) on phantasms. These are two entirely different processes. The intellect can *reflect* on phantasms, and in this way it can indirectly apprehend particulars. On reflection, see §§8.4 and 11.2.

Aquinas's contemporaries were themselves puzzled about how the turn toward phantasms was supposed to provide access to particulars. Scotus, for instance, in his *Quaestiones de anima*, attacks Aquinas for both positing the turn toward phantasms as a way of getting at particulars and insisting that the intellect can have no apprehension of particulars except through reflection (Q22, 629ab).

- 18 In giving the senses this kind of role in intellectual thought, Aquinas is not merely reflecting the common consensus of his era. For a radically different sort of account, see Avicenna, who acknowledges the kind of help that the imagination can bring to the intellect, but then adds that "this happens only at the start and not afterwards, except occasionally. Once the soul progresses and is strengthened, then it alone carries out its actions, absolutely through itself" (*De anima* V.3; p. 105).
- 19 As the examples in the text suggest, the phantasms we need seem almost always to be visual phantasms. It is natural for visual phantasms to serve as our paradigm cases, and for us sometimes to talk as if all phantasms are visual. (Thus I've been speaking of 'images' and 'pictures'.) But in fact something stronger seems to be the case: the turn toward phantasms, as I've described it, seems to concern the visual case exclusively. The stored impressions of sounds, flavors, odors, etc., do not seem to help us think. Matters are presumably different for the blind, however, especially for the congenitally blind. It would be interesting to study how well Aquinas's account applies in such cases.
- 20 But see Kenny (1993), who takes the intellect to be dependent on phantasms in the following way:

For a man to be exercising the concept, say, of red, it seems that he must be either discriminating red from other colours around him, or having a mental image of redness, or a mental echo of the word 'red,' or be talking, reading or writing about redness, or something of the kind (p. 97).

Kenny's idea – he concedes it is "doubtful" that this was Aquinas's idea – is that one cannot be said to be thinking about red at all without employing the concept in some sensory context. This is an instance of Kenny's general project of turning Aquinas into Ryle or Wittgenstein (see §11.3). Whatever the philosophical merits of this idea, it clearly goes well beyond the texts. Kenny essentially gives up on understanding the turn toward phantasms in Aquinas's terms.

Chapter 10. Mind and reality

- 1 The first assumption was a key premise in 76.1c: "For each one of us experiences that it is oneself who intellectually cognizes." Aquinas doesn't bother to make the second assumption explicit. But see Aristotle, *De an.* III 4, 429a23: "I call the intellect that by which the soul thinks and supposes."
- 2 Immanent realism has been prominently defended, in recent years, by David Armstrong (1978), who takes it to be Aristotle's position. In contrast, medieval philosophers generally took this view to be untenable, perhaps even worse than Platonism. Ockham believed it to be "entirely absurd, destroying all of Aristotle's philosophy, and all of knowledge, truth and reason – the worst error in philosophy" (*In Periherm.* I pro. sec. 8).

Although Aquinas is clear in denying that universals exist outside the mind, he is sometimes taken to have held that common natures are nevertheless literally common, in the sense that one and the same nature exists in every particular of the same nature. Edwards (1985b) takes this view, and concludes that "Aquinas turns out to be almost as strong a realist as Duns Scotus" (p. 79). Spade (1998) makes a very similar argument. This would be consistent with holding that universals exist only in the mind, because a universal in Aquinas's terms is not something *existing* in many individuals, but something *predicable* of many (see Aristotle, *De int.* 17a39).

Here I don't mean to defend such an interpretation. I claim only that Aquinas is committed to the existence *in re* of natures that are somehow unchanging and necessary. Whether this makes such natures common in the sense that they are literally shared is a question beyond the scope of this book. Even my limited thesis is controversial: cf., e.g., Owens (1957), who denies that common natures have existence within a particular, except insofar as they are identical with that particular.

Klima (2000), sec. 7, defends something like my limited thesis. For two of the more detailed discussions of common natures in Aquinas, see *QQ* 8.1.1 and *InDA* III.8.239–97. But the texts leave many issues unsettled. This is an area where Aquinas's views seem unstable at best and perhaps even superficial, especially in light of later developments in Scotus, Ockham, et al.

- 3 Aquinas waits until 90.4 to consider “whether the human soul was produced before the body” (90.4). As discussed in §4.2, this issue was a surprisingly open one for medieval philosophers and theologians. Aquinas's argument for a negative answer rests on conclusions reached in the Treatise: that “the soul is united to the body as its form” (see 76.1), that the soul is “naturally a *part* of human nature” (see 75.4), and that the soul “has a complete nature only inasmuch as it is united to its body.” This last conclusion depends crucially on the conclusions Aquinas reaches in Q84. If intellectual cognition were naturally possible without the senses, then the rational soul's proper operation would be independent of the senses, which means that the rational soul would be complete without the body. Indeed, “it would be pointless for it to be united to a body” (84.4c).
- 4 An exception would have to be made for cases in which God, angels, or even demons directly give us knowledge – e.g., the Annunciation. But such an event “is not natural to our intellect” (86.4 ad 2) and so is not strictly relevant to the present discussion, which is implicitly restricted to the intellect's natural operations. Avicenna's view is unacceptable because he supposed that some sort of annunciation is constantly occurring as part of the natural order. (For Avicenna's own account of his view, see *Metaphysics (Shifa')* VII.2 (ed. Anawati, pp. 57–62) and *Liber de anima* V.6 (pp. 146–50). Aquinas seems to follow the latter.)
- 5 See, e.g., Weinberg (1964), pp. 206–7. For statements of the idea that Aquinas simply repudiates the theory of divine illumination, see Effler (1968), p. 6; Owens (1982), pp. 454–56. Copleston (1972) speaks of Aquinas's “minimizing interpretation” of the theory (p. 37). I too have taken this line, in Pasnau (1995), pp. 51–52. But I would now suggest that there is nothing insincere or backhanded in Aquinas's approach, and that such reactions to the text shed more light on the proclivities of his readers.
- 6 On divine ideas as an object of cognition, see Marston's clear rejection at *De anima* 3 ad 2–3 (p. 265). Henry of Ghent would later write that “the divine light absolutely and purely illuminating the mind toward a knowledge of truth stands only as the basis [*ratio*] of intellectual cognition, not as the object of sight and intellect” (*Summa quaestionum ordinariam* art.1 q.3 resp. [f.8v]).

On the insufficiency of illumination alone, see again Marston, *De anima* 3 ad 4 (p. 265). Bonaventure, the leading thirteenth-century proponent of the theory, argued that to cognize “in the light of the eternal natures” cannot mean that this light is “the whole and sole basis of cognizing.” If that were the meaning, then “cognition in this life would not differ from cognition in the next” (*De scientia Christi* q.4 (*Opera Omnia* vol. 5, pp. 22–23)).

- 7 “The same attribute cannot at the same time belong and not belong to the same subject in the same respect” (Aristotle, *Met.* IV 3, 1005b19–20). We have an analogous grasp of moral principles, such as *Bad things should be shunned* (QDVC 8c), and we have natural desires, too, such as the desire for knowledge and the desire for the good (II *SENT* 39.2.1c). But we do not have innate virtues, because virtues are habits that can be acquired only through practice (12ae 51.1, 63.1).
- 8 This is not an isolated passage, nor does it represent a view restricted to his earlier works. See 117.1, 12ae 51.1, 63.1, *SCG* IV.11.3477, QDVC 8c, QDV 8.15c, 10.6 ad 3, 11.1, I *SENT* 17.1.3c, III *SENT* 33.1.2.1c. Spruit (1994) finds this view in other medieval figures, including Albert the Great (pp. 142–44), Roger Bacon (p. 155), Giles of Rome (pp. 195–99), and James of Viterbo (239), but insists – wrongly in my

view – on “a marked conceptual distance from Thomas’s view of the intellectual light” (pp. 143–44).

Based on these passages, some have questioned the conventional view that, for Aquinas, first principles are not innate. For discussion and an effective defense of the conventional view, see Seidl (1988).

- 9 When the mind apprehends the truth of an a priori proposition, it does so immediately and infallibly, not because the mind has received any special illumination, but because the terms of the proposition are themselves intelligible: our grasp of a proposition “seems to follow necessarily from the character of the terms, which character they derive from the divine intellect’s causing those terms to have intelligible being naturally” (*Ordinatio* I.3.1.4 n.268). For detailed discussion of Scotus’s views, see Pasnau (forthcoming-b). I discuss the history of illumination theory in more detail in Pasnau (1999a).

No doubt Scotus is not the very first philosopher to push naturalism so far. For an earlier medieval precedent, see Siger of Brabant’s *Quaestiones in tertium de anima*.

Klima (2000) takes issue with the enlarged role for illumination that I find in Aquinas, remarking that

although Aquinas would still leave some room for illumination in his epistemology, he would provide for illumination *an entirely naturalistic interpretation*, as far as the acquisition of our intellectual concepts of material things are concerned, by simply identifying it with the “intellectual light in us”, that is, the active intellect, which enables us to acquire these concepts from experience by abstraction (sec. 5, my emphasis).

If ‘naturalistic’ means simply that the illumination is innate, that it is given to all human beings from the moment of creation, then I agree. But I would contrast a naturalistic interpretation with a supernatural one (see **Loquendo naturaliter**, p. 202), and insist that Aquinas sees something supernatural at work in the operation of agent intellect, something that can not be explained except by a raw appeal to our participating in the divine light. At this point there is no further philosophical account to be had, and so I find it misleading to refer Aquinas’s interpretation as “naturalistic.”

- 10 Cf. *QDV* 10.6 ad 1: “Forms that are sensible, or are abstracted from things that are sensible, cannot act on our mind, unless insofar as they are rendered immaterial by the light of agent intellect, and thus in a way *are made homogeneous with the possible intellect*, on which they act.”

The sort of immateriality in question here is distinct from the kind of immaterial existence that is synonymous with spiritual and intentional existence. In the latter sense, sensible species and even species *in medio* are immaterial (see *Theories*, ch. 1).

It is hard to avoid thinking of the agent intellect as transforming phantasms, but this is strictly speaking the wrong way of putting it. The phantasm, rather than being transformed into something immaterial, is instead used to produce an immaterial form, an intelligible species.

It is not that numerically the same form that once was in the phantasms is later made in the possible intellect, in the way that a body is taken from one place and transferred to another (85.1 ad 3).

- 11 Cf. *SCG* II.77.1581: “Phantasms . . . have not yet attained intelligible being, because (i) they are likenesses of sensible things even in terms of the material conditions that are their individual properties, and (ii) they are also in material organs. Therefore they are not actually intelligible.”

In 85.1 ad 4, Aquinas distinguishes the agent intellect’s activity of abstraction from its activity of illumination, which consists in making phantasms “ready to have intelligible intentions abstracted from them.” It would be attractive to apply this distinction to the two types of abstraction under discussion, matching illumination with abstraction (ii). There is, however, little textual justification for doing so. Indeed, I cannot see how to make this illumination/abstraction distinction do any substantial work.

- 12 It was commonplace among Aquinas’s medieval critics to question why the intellect cannot directly apprehend material singular things (see Pasnau 1998, pp. 305–6; for the broader history of this debate, see Bérubé 1964). Peter John Olivi is noteworthy for having criticized not only that assumption, but also the assumption that the senses cannot apprehend

universals. He takes aim at "followers of the pagan philosophers" who defend four theses, including:

- (1) "Intellect *per se* and immediately apprehends nothing beyond universals";
- (2) "Species or acts of apprehension inhering immediately within an object having natural matter cannot have intellectual properties";
- (4) "Species existing in intellect are stripped of all particular conditions" (*II Sent.* Q67; II, 617).

These philosophers, Olivi says, "presuppose these four theses as first principles known *per se*, rather than trying to prove them." In (2), Olivi puts his finger on the key assumption behind the medieval opposition to materialist theories of mind (see §2.2).

- 13 Aquinas discusses agreement in representation at *QDV* 2.3 ad 9, 2.5 ad 5, 8.1c; *IV SENT* 49.2.1c. See *Theories*, pp. 105-13.

Olivi (see previous note) anticipated that his opponents might appeal to the principle that "like must be represented by like." From this, he recognized, one might try to infer "that every species representing something extended and spatially located is extended and spatially located," and "that a species representing a universal must be universal." But Olivi pointed to his opponents' own words:

They themselves are certainly compelled to hold that the things we know through intellect and perceive through the senses are represented to us through things that are unlike, in terms of being, but alike in terms of expressing and representing (*II Sent.* Q67; II, 617-18).

This clears the way for universals to be represented by particulars and for material things to be represented by immaterial things.

- 14 Pasnau (1998) argues that the content fallacy leads Aquinas astray in many important ways. As noted already, it affects his argument that the intellect cannot directly cognize singulars, and that the senses cannot cognize universals at all. It also affects one of his favorite arguments for the immateriality of the soul, as Novak (1987) persuasively showed.

Kluge (1976) is the only recent author I have found that recognizes an ambiguity in Aquinas's notion of abstraction. Kluge argues that standard treatments of Aquinas are "systematically ambiguous" between the two types of abstraction I have described. (He speaks of epistemological and metaphysical abstraction.) But he stops short of accusing Aquinas of any confusion, and he fails to explain why Aquinas takes these two types of abstraction to be mutually entailing.

Cajetan also distinguishes two kinds of abstraction: one consists in "abstracting the intelligible species from phantasms"; the other occurs "when we cognize the quiddity of a human being, abstracting from this human being and that one." The former is "the real production of an abstract thing, an intelligible species," whereas the latter "is merely the stripping of the abstract thing, not through a real divestment, but through the denial of attention or consideration" (85.1.III). This appears to be another way of marking the distinction between the intrinsic and the intentional. Aware that Aquinas cannot allow these two operations to come apart, Cajetan goes on to remark, obscurely, that "the second is the effect of the first, and is of the same character [*rationalis*] as the first." Surprisingly, he then claims that the first "real" abstraction is performed by the agent intellect, whereas the second abstraction is performed by the possible intellect. No textual evidence is offered for this intriguing proposal, and it is easy to find evidence against it. Still, we will see in §§10.4 and 10.5 that Cajetan is right to suggest that the possible intellect plays the leading role in the intellect's pursuit of the universal essences of things.

- 15 In a provocative paper, Peter King (1994a) argues that medieval theories of abstraction ultimately collapsed as a "research program" because they were caught in this dilemma: on one hand, concepts couldn't be explicit at the sensory level; on the other hand, abstraction presupposes that the information is explicitly there, and merely needs to be separated out. In the remainder of this chapter I attempt to rehabilitate Aquinas's project.
- 16 It is the cogitative power that is responsible for actually apprehending a human being as a particular *human being* (see §§8.4 and 9.2). To have an actual grasp of Callias as human (as opposed to that information's merely being implicitly contained within the sensation)

might seem to require conceptualization. This would run contrary to the governing Aristotelian assumption that the senses are nonconceptual. But we can say that the cogitative power doesn't give us true conceptualization, insofar as the cogitative power doesn't have the ability to grasp universal concepts (see §10.4 below).

- 17 This conclusion puts me in agreement with Geach (1957), who denies that Aquinas defends abstractionism, "the doctrine that a concept is acquired by a process of singling out in attention some one feature given in direct experience – *abstracting* it – and ignoring the other features simultaneously given – *abstracting from* them" (p. 18). Geach fails to acknowledge that Aquinas describes the operation of agent intellect in precisely these terms, and he offers the flimsiest of textual evidence for his reading of Aquinas (see pp. 130–31), as Deely (1971) points out. Still, Geach saw that an abstractionist theory of this sort does not work, and he was right (on a priori grounds, as it were) to decide that this could not have been Aquinas's theory. In §§10.4 and 10.5 I try to go beyond Geach and to explain something of what Aquinas's theory actually is.
- 18 In a fairly trivial sense, we can and do grasp all intelligible being: I refer to my concept of *intelligible being* simply by writing down those two words. But our *proper* object, in this life, is a subset of all being: it is the nature of beings in the material world. This is what human beings are suited to apprehend. For Scotus's disagreement with Aquinas on this point, see **What is our natural state?**, p. 297.
- 19 I am referring to the external senses. For the internal senses, matters are more complex. The cogitative power grasps the nature of an object, but only in particular cases. It doesn't form universal concepts (see §§8.4, 9.2, and note 16 above). Memory stores representations of particular things that were once seen. Phantasia constructs imaginary images that do not represent any particular object. (Presumably, rather than concede that such images represent universally, Aquinas would say that these images fail to represent any object. That is one reason why phantasms are useful to intellect (see §9.4).)

Aquinas says in 85.3c that "with respect to both sense and intellect, more common cognition is prior to less common cognition." This is to say that even the senses begin with what is more universal – but here Aquinas means confusedly universal.

For an excellent neo-Thomistic treatment of these issues, see Dretske (1981), esp. part III.

- 20 Here I am using 'idea' to refer to the simple first apprehensions of intellect, formed by means of intelligible species. One might refer to such ideas as concepts, but I want to reserve the latter term for a different purpose (see §10.5). Aquinas himself uses the Latin word *idea* in a rather different way, to refer to mental exemplars of things that are to be formed outside the mind (see 15.3c).
- 21 In this sense, not all intellectual beings are rational. (But this is not to say that they are irrational!) To say that human beings are rational animals (at least for Aquinas) is to say that we employ a certain method of cognition. It does not imply that we are always (or even usually) particularly good at employing this method: rational animals may often act in ways that are profoundly irrational. (Indeed, only a rational animal can be irrational.)

Strictly speaking, a creature without intellect might display some degree of rationality. The intellect's immateriality is required only for its universality. This is why the material cogitative power can be rational (see §8.4). But full-fledged rationality requires the capacity for conceptualization, and this is why Aquinas can accept the traditional definition of human beings as rational animals. Still, it would be better to define human beings as conceptual animals, the only animals capable of acquiring concepts that are comprehensively universal.

For further discussion of Aquinas on intellectual cognition, esp. as contrasted with the case of the angels, see Marenbon (1987), pp. 116–31.

- 22 Surprisingly, the Treatise never uses the term *verbum* in this sense, and only once refers to this operation of intellect at all (in 85.2 ad 3). But see, e.g., *QDP* 9.9c, *De rationibus fidei* ch. 3, *QDV* 4.1c, *In Joh* I.1, and the classic study by Lonergan (1967). For further discussion of the link between the mental word and language, see Pasnau (1997a) and *Theories*, ch. 8.

On transcendental concepts as the initial basis of human thought, see Aertsen (1996), pp. 80–84, 146–51, 160–85. Wippel (2000), p. 42, denies that being and the other transcendentials are grasped first in any temporal sense. But I am unpersuaded by his arguments.

Chapter 11. Knowing the mind

- 1 It seems implausible, *prima facie*, that immateriality should be a sufficient condition for cognition. Couldn't God have created things that are entirely immaterial, and yet utterly incapable of cognition? (Ockham makes just this argument against Aquinas's account of cognition (*Ord.* 35.1; *Opera Theol.* IV, p. 427).) Aquinas seems committed to saying that this is not possible, not even for God. See, e.g., *SCG* I.44.376, where he makes a direct inference from God's being immaterial to God's having intellect: "a thing has intellect as a result of being without matter."

The passage from 84.2c quoted in the main text ties the capacity for cognition to *degrees* of immateriality. This reflects the fact that Aquinas thinks there are different ways in which a thing can be immaterial. To have an intellect, a thing must be genuinely incorporeal (§§2.2 and 10.4). But even things that are wholly corporeal can still have the sort of immateriality required for sensory cognition (see §2.3 and *Theories*, pp. 55–57).

- 2 This is how Scotus too would later gloss the *De anima* passage (*Ordinatio* I.3.3.2 nn.541–42), and how Irwin and Fine translate it (Aristotle 1995, p. 200). Smith and Hamlyn take it straight, as I have, and Hamlyn comments, "Here, at any rate, Aristotle seems to identify the intellect with pure thought" (p. 139). For a detailed discussion of Aristotle's view, see Shields (1995).
- 3 On the modern consensus, see Chisholm (1969), who cites Russell, Carnap, and Sartre. Chisholm himself wants to reject this current orthodoxy, which he does by arguing that to observe our perceptions just is to observe ourselves.

Questions about self-knowledge are inherently difficult to get one's mind around, and so throughout this chapter I find it useful – even more so than usual – to consider Aquinas's views in a broader context, situating him not just among his contemporaries but also among modern accounts. As always, the point of doing this is not to show that Aquinas remains meaningful today but to become more clear about the implications of what Aquinas is saying.

- 4 I should note that it is not clear just what Aristotle himself means in making this claim; he doesn't go on to draw the kinds of conclusions that Aquinas draws. Aquinas's reading is inspired by Averroes, whose *Commentarium magnum* (III.15) reads Aristotle as saying that intellect is known *per intentionem*, just as other things are, rather than *per se*. (Aquinas acknowledges the debt at *QDV* 10.8c, where he remarks that *per intentionem* means through an intelligible species.)

On Aquinas's view, as we'll see, the mind understands itself through the species of other things. Roger Marston would later remark that, if the analogy of 430a2 is taken seriously, the mind should understand itself through a species of *itself*, not through the species of other things. Marston labels Aquinas's reading a "*distorta et extorta expositio*" (*De anima* Q1, pp. 205–6).

- 5 For the denial that the *cogito* represents an incomplete syllogism, see his replies to Mersenne (Second Replies; CSM II, 100) and to Gassendi (Appendix to the Fifth Objections and Replies; CSM II, 271). On the place of prior knowledge, see *Principles* I.10 (CSM I, 196). For a nice discussion of the difficulties involved here, see Markie (1992).
- 6 Aquinas, throughout his work, has very little to say about epistemic justification. It is clear that he regards the demonstrative syllogism as the paradigmatic form of justification, and that he regards *scientia*, in the narrow Aristotelian sense, as the paradigmatic form of knowledge. But he of course thinks that we often know things without the benefit of any syllogism; self-knowledge seems to be a clear case of that. For two very different attempts to construct an Aquinian theory of knowledge, see Stump (1992), who argues for a reliabilist approach, and MacDonald (1993), who argues for a form of foundationalism. See **Ethical foundationalism**, p. 308.

In the main text I implicitly suggest a kind of hybrid view, where ordinary knowledge is not grounded on anything like the demonstrative method, but where it does indirectly derive its legitimacy from the efforts of theologians and philosophers to give a firm foundation to the things we know. See Pasnau (1996).

- 7 In the previous article, Aquinas had described a concrete instance of this process:

From the fact that the human soul cognizes the universal natures of things, it has perceived that the species by which we intellectually cognize is immaterial (otherwise it would be individuated, and so would not lead to a cognition of what is universal). But from the fact that the intelligible species is immaterial, it has perceived that the intellect is a thing independent of matter, and from this it has gone on to cognize the other distinctive features of the intellective soul (*QDV* 10.8c).

This sequence begins with the intellect's *act* – cognizing the universal natures of things – then moves to *species* and then to various “distinctive features” of the intellective capacity. On the final and most difficult step (not mentioned here) to the soul's *essence*, see §5.5, where I stress how Aquinas's general thinking about our knowledge of essences fits neatly with his account of self-knowledge.

- 8 At this point, the α/β distinction becomes not so important. The α level does focus strictly on *self*-knowledge, whereas the β level aims to generalize across all human souls. Hence the β level must confront the problem of other minds (see §11.4). But in each case the starting point will be the same: first-person awareness of one's own actions. It's surely no accident that 87.3, which takes up the soul's knowledge of its own acts, is the only article in Q87 that does not draw this level distinction. So at this point we can put aside the α/β distinction and confront head-on the question of how the soul first achieves some knowledge of its own states.

- 9 Putallaz (1991b) quotes 87.3 ad 2 (p. 155), but he nevertheless assumes, without any evident justification, that the direct act and the reflective act happen concurrently. This raises what he calls an “*importante difficulté* . . . [C]omment l'intellect peut-il être ordonné simultanément à deux «objets» différents?” (p. 153). He describes three possible ways out, and chooses the third, according to which these two intellectual acts can occur simultaneously because in fact they do not have two distinct objects, but only one, conceived of in different ways (p. 154). This cannot work: it's conceptually incoherent for a single power to be directed toward two actions, no matter how similar their objects are. See, e.g., *QDV* 8.14c: “. . . this would require that the same power be determined toward different acts, which is impossible.” Reflection could be concurrent with the outwardly directed act only if there were a special reflective power. In effect, then, Putallaz's interpretation saddles Aquinas with the introspective model, according to which there is a separate inner sense that watches the mind at work.

- 10 This passage is simply a special case of Aquinas's general principle that “all the things we intellectually cognize in our present state are cognized by us through a comparison to natural sensible things” (84.8c; §9.4). For other clear statements applying this principle to self-knowledge, see III *SENT* 23.1.2 ad 3 and *QDA* 3 ad 4, which usefully invokes the governing Aristotelian maxim:

The possible intellect is said to be “intelligible just like other intelligibles” because it understands itself through an intelligible species of other intelligible things. For it cognizes its own operation from its object, and through its operation it comes to cognize itself.

- 11 Geach (1957), in this same vein, argues against the notion of an ‘inner sense’ on the grounds that no mental images are associated with introspection (p. 107). Quinton (1977) replies to Geach “in defense of introspection,” but the position Quinton actually defends is far more modest: “that we do have direct knowledge or awareness of our own states of mind, that we do not have to observe our own speech and behavior in order to find out whether we are angry or elated or what we believe or hope or fear . . .” (p. 77). Of course, neither Aquinas nor Geach would have denied the second half of this claim.
- 12 In *Theories*, chs. 6–7, I confessed to having “turned Aquinas into Locke . . . in important respects” (p. 244). The present discussion highlights some of the respects in which Aquinas is very different from Locke. Like Locke, as I argued in *Theories*, Aquinas thinks

that species (ideas) come between us and the world. This is so inasmuch as Aquinas cannot resist conceiving of species as the objects of some kind of precognitive inward attention. Species are by no means merely causal intermediaries, like the cornea and optic nerve. Still, these species are not standardly the things we form beliefs and judgments about. Moreover, as I am stressing here (and didn't see when writing *Theories*), Aquinas takes the position that we *can't* directly turn our attention to the species themselves. This is a very important difference between Aquinas's view and Locke's.

- 13 I have found that Evans (1982), pp. 205–33, discusses in detail the phenomenon I am describing here, and arrives at a view that is strikingly similar to the account I ascribe to Aquinas. But Evans pays careful attention to an issue that Aquinas does not explicitly address: the issue of what licenses an ascent from the thought of cheese to the thought that *I* am thinking of cheese. Where, in other words, does the idea of the self come from? In saying that there is nothing particularly puzzling about such thoughts, I do not mean to suggest that the background concepts required to form such first-person thoughts are trivial or uninteresting.

It is sometimes suggested that the ability to form such thoughts – in my terms, the capacity for cognitive ascent – is what distinguishes persons from nonpersons (see, in particular, Baker 2000). Aquinas would regard the suggestion as confusing a symptom with its cause. On his view, persons are distinguished by having minds (§4.2), where to have a mind is to have the capacity for conceptual (universal) thought (§10.4). The capacity for cognitive ascent requires a certain set of concepts, and hence requires a mind. First-person thoughts are therefore a sign of personhood. But there is nothing special in this regard about first-person thoughts, because all conceptual thinking is a sign of personhood.

- 14 The analogy is even more exact than it might seem, since seeing the object and seeing the mirror are both cases of sensation per accidens through intellect. According to the analysis developed in §9.2, the external senses are not doing anything different in the two cases; it is either the cogitative power or intellect that is doing something different, by conceptualizing the sensory impression in different ways. This is precisely what happens in the case of reflection.

The analogy is also useful for understanding why reflection can't occur at the same time as the outwardly directed act. One can't do both at the same time, just as one can't see the mirror image both as an object and, simultaneously, as an image (or see the duck-rabbit as both a duck and a rabbit (§9.2)).

A disputed question attributed to Aquinas explicitly makes the connection between self-knowledge and sensation per accidens (Kennedy 1977, p. 38). But I see no very strong reasons for accepting the attribution to Aquinas. (And, for some persuasive reasons against doing so, see Putallaz 1991b, pp. 305–10.)

- 15 Olivi's treatment of self-knowledge is characteristic of Franciscan thought in the later thirteenth century. See also Matthew of Aquasparta, *De cognitione* Q5; John Duns Scotus, *Quodlibet* 6.19, *Opus Oxon.* IV.49.8, IV.43.2. The tradition goes back to Augustine: see, e.g., *De trinitate* X.x, X.xv–xvi. For a careful study of later medieval theories, see Putallaz (1991a).

By the time this book is published, it may be that the middle ground I describe here will not seem so underpopulated. The 1990s seems to have seen a groundswell of interest in Moorean transparency, leading among other things to accounts of self-knowledge that are very much in the spirit of Aquinas's theory. Notable in this regard is Dretske (1995), ch. 2, who in this as in much else proves himself a leading proponent of neo-Thomism. Dretske (1999) points out that an account of this sort faces special problems regarding reflection on mental states that apparently have no objects, such as hunger, headaches, and depression. It is not clear to me what Aquinas would say about such cases.

- 16 For textual support, these authors draw on Aquinas's account in *QDV* 10.8c of the soul's dispositional knowledge of itself: "as regards dispositional cognition, I say that the soul sees itself through its essence." But this is just what Aquinas says it is, the *disposition* for

self-knowledge; he does not mean that the soul can *actually* grasp itself through its essence. I *SENT* 3.4.5c is misleading on this point, but 1a 93.7 ad 4 clarifies beyond all doubt.

Aquinas's occasional references to dispositional self-knowledge strike me as nothing more than a strategy for deflating various remarks found in Augustine to the effect that "the mind always understands and loves itself" (*De trinitate* XIV.vi.9). On Aquinas's reading, this means only that the soul is always *disposed* to understand and love itself. It cannot actually achieve this understanding, however, except by working through objects and acts. The mere disposition does not yield self-knowledge.

What's (mildly) interesting here is that self-knowledge is unlike other forms of knowledge insofar as these others require patient study. In 87.1c he makes this point in the context of the α/β distinction:

For to have the first [α] cognition about the mind it is enough to have the presence itself of the mind, which is the source of the act by which the mind perceives itself. In this sense it is said to cognize itself through its presence. But to have the second [β] cognition about the mind, its presence is not enough; diligent and subtle investigation is also required.

Like most forms of knowledge, β -level investigation consists in developing a further set of dispositions, a developed theory of mind. In contrast, the disposition for α -level self-knowledge is innate. This sort of self-knowledge doesn't need to be taught. Still, even here, the mind knows itself "through its presence" only in the sense that the mind is "the source of the act" that is grasped by focusing in a special reflective way on the object of that act. There is no way to get at the mind itself directly.

- 17 Surprisingly, even Putallaz (1991b) takes this sort of line, seemingly more influenced by twentieth-century Thomism than by Aquinas himself (pp. 92–117). Naturally, not all of Aquinas's readers have mischaracterized his account in this way. Donagan (1987), pp. 54–55, stresses how Aquinas's theory of action is defended not by introspection but by data about how human beings actually behave. The account in Gilson (1936) is both accurate and vivid: "In a philosophy like his [Aquinas's] where all knowledge presupposes a sense intuition, the soul can know itself only indirectly. No doubt it is immediately present to itself, but it cannot apprehend itself immediately, since between the spirituality of its essence and the knowledge it has of it, a veil of sensible images is always interposed" (p. 224).
- 18 Ryle (1949), p. 179. Ryle does allow that we can know what we are thinking without having to say it out loud, and the remarks he makes on this score are plausible. But he pushes so hard on the parallel between knowledge of our minds and knowledge of other minds that his view lends itself to caricature. For Wittgenstein, see, esp., *Philosophical Investigations*, pt. I, §293, and following.
- 19 Brandom is not exactly a behaviorist: as he puts it, "what is appealed to is role in the implicitly normative linguistic social practices of a community, rather than the behavioral economy of a single individual" (1997, pp. 150–51). Brandom and the behaviorists nevertheless belong in the same camp, broadly speaking, because of their shared mistrust of explanations that appeal to internal mental states. When I refer to this camp collectively as *the behaviorists*, this should be understood as shorthand for *the behaviorists and their offspring*.
- 20 This may still seem too general to count as the problem of other minds, because it is formulated in terms of *immateriality* rather than *minds*. But Aquinas believes (as noted in §11.1) that mind and immateriality are mutually entailing. So the problem of knowing immaterial things is coextensive with the problem of knowing the mind.
- 21 See, esp., *SCG* III.41–46, *QDA* 16, and IV *SENT* 49.2.1 (= 3a supp. 92.1). One reason Aquinas is so interested in this question, aside from its obvious methodological interest, is that it has a bearing on the ultimate meaning of human life. According to Christians, knowledge of God is the ultimate goal of human existence, our ultimate happiness. According to many Greek and Islamic philosophers, knowledge of immaterial substances (*not* identified as angels) is the ultimate cognitive achievement and hence (!) the ultimate aim of life (see 89.2 obj. 3).

Chapter 12. Life after death

- 1 In the more detailed parallel version of this argument in *QDA* 14c, Aquinas makes it clear that premise three should not be limited to subsistent forms: “form itself cannot be corrupted per se, but per accidens, by the composite’s being corrupted.” See also *QDIA* ad 1: “A form is generated or corrupted only per accidens.” He is thinking, in these passages, of substantial forms in general. Perhaps 75.6 speaks only of subsistent forms because the concept of a substantial form does not get introduced until 76.4.

Given that all forms supply existence (*esse*) of one sort or another, one might wonder whether the argument could apply to all forms, not just to substantial ones. Perhaps one reason to limit the argument to substantial form comes in 89.5c, where Aquinas discusses how a form can be corrupted per se when corrupted by its contrary. His example is an accidental form: hot’s being corrupted by cold. But it is not clear to me that this sort of corruption per se is the same as the sort discussed in 85.6. The example raises complex questions regarding how Aquinas conceives of the physics of qualitative change.

- 2 There are interesting parallels between this argument and an argument Plato offers, near the end of the *Phaedo* (105c–107a), for the soul’s immortality. Plato likewise stresses the soul’s status as that which gives the body life, and on this basis he concludes that the soul is deathless and hence indestructible.

Aquinas knew Plato’s argument only at second hand, mainly through Nemesius (see *Platonism*, p. 78). But it is clear Aquinas would criticize Plato’s argument as proving too much. Most clearly, the argument must apply to the souls of all living things (see Bostock 1986, p. 189). Aquinas identifies that as an implication of Plato’s view, and of course rejects it, remarking that “since immortality is distinctive of the human soul, arguments for immortality must be taken from that which is distinctive of the human soul, among all souls: its having intellect” (*QDIA* c). This precept guides Aquinas’s decision to argue for the human soul’s subsistence (75.2) before demonstrating its immortality (75.6).

There is a more interesting and subtle way in which the final argument of the *Phaedo* seems to prove too much, from Aquinas’s perspective. It is Aquinas’s view is that *all* substantial forms give existence to the thing they inform. That is why no such form can be destroyed per se – unless it could somehow be separated from itself. But this suggests that the *Phaedo*’s argument could be applied to all substantial forms, not just souls.

- 3 One might question whether loss of function should count as *corruption*, even if it entails going out of existence. Perhaps this is what McCormick (1939) has in mind when he suggests that Aquinas’s arguments should be read as establishing only the soul’s incorruptibility, not its immortality. (But see note 5.)

I claim that the loss of function in question should count as corruption, since it is a going out of existence that results from the separation of form and matter, which is what Aquinas thinks corruption is (as quoted in main text). I take Scotus to be making a similar point:

Intellect is incorruptible inasmuch as it does not have an organ through whose corruption its operation could be corrupted. But it does not follow from this that its operation is entirely incorruptible, . . . only that its operation is not corruptible in the way that an organ-based capacity is corruptible (*Opus ox.* IV.43.2; tr. 1962, p. 159).

- 4 Many scholastics, unpersuaded by Aquinas’s arguments for the soul’s immateriality, subsistence, and imperishability, took just this view. See, e.g., Scotus, *Opus ox.* IV.43.2 (tr. 1962); Ockham, *Quodlibet* I.10; Pomponazzi, *De immortalitate animae*. Even Cajetan, Aquinas’s great commentator, came to have doubts about whether philosophical arguments were available (see his *Commentaria in de anima* III.2).

Aquinas’s arguments on this score have continued to be perceived as among the least persuasive parts of his thought. Norman Kretzmann, who seemed able to find the good in everything Aquinas wrote, remarked at a conference in the summer of 1998 that he was persuaded by none of Aquinas’s arguments for the soul’s immortality. This remark was especially poignant in that it came just a few months before the fatal end of Kretzmann’s long battle against cancer.

- 5 Owens (1987) in effect takes this route when he suggests that Aquinas's arguments should be read as establishing the soul's incorruptibility rather than its immortality. (McCormick 1939 had earlier made this suggestion, and Bazán 1997 endorses it as well (p. 125).) Incorruptibility, on this usage, provides only for a substance's continued *existence*, whereas immortality provides for its continued *life*, and hence its continued *operation*. Owens wants to open up only the slightest of logical spaces here, a formal distinction. The strategy is dubious, however. Owens recognizes that Aquinas maintains the OE conditional. But it is this OE conditional that makes all the trouble, formal distinction or no formal distinction, because it can be used to turn a proof of the soul's incorruptibility into a proof of the soul's immortality (as Owens uses these terms). No wonder, then, that Aquinas almost always uses these terms interchangeably.

Owens (1974) speaks in this connection of "an Aristotelian aporia" and concedes that "the situation remains unsatisfactory" (p. 68).

- 6 Aristotle seems to make this claim at 403a10: "And so if some function or affection of the soul is distinctive of it, then the soul would be separable; but if not, then it would not be separable." Elsewhere, Aristotle is quite clear in articulating what I'm calling the OE conditional:

All things are defined by their function: for in those cases where things are able to perform their function, each thing truly is F: e.g., an eye, when it can see. But when something cannot perform that function, it is homonymously F, like a dead eye or one made of stone (*Meteor.* IV 12, 390a10–15).

- 7 See Descartes's Fifth Set of Replies, pp. 246–47 (AT VII, 356). It seems clear that Aquinas does not think the human intellect must constantly be functioning when connected to a body. But Aquinas does share with Descartes the view that the human soul begins to think from its earliest moments, in utero (see §4.2).

Strictly speaking, the separated soul *is* a separate substance, and so one might take Aquinas's remarks on the latter to apply to separated souls as well. But in general this is not his practice. It is clear in context, e.g., that *SCG* II.97 (quoted earlier in the main text) means to distinguish separate substances and separated souls. Thus he concludes in II.93 that for each species of separate substance there is just one individual within that species; this is of course not true for human souls. Then, in II.94, he argues that "the soul does not belong to the same species as the separate substances."

- 8 I find myself in disagreement, then, with McCabe (1969), who holds that "there cannot be an *argument* to show that it is probable that the soul is immortal" (p. 297, original emphasis). It seems to me that Aquinas's argument does (at most) yield a probability, not a certainty.

Understandably, the claim that the separated soul will take on a new *modus existendi* has sometimes seemed obscure to commentators. McCormick (1939) fears that Aquinas cannot establish a difference in *modus existendi* until he establishes a difference in *modus operandi* (p. 369), which would doom the whole argument. This criticism fails to recognize how simple Aquinas's point is. The new mode of existence he points to is nothing more than existence without the body: being a *separated* soul.

- 9 The same claim is made expressly for separated souls at *QDA* 18 ad 13. In both places, it is asserted on the authority of Pseudo-Dionysius. Although the Leonine text of 117.2sc refers to *The Divine Names*, ch. 4, the intended reference is *The Celestial Hierarchy*, ch. 4. In 117.2 obj. 2, he considers an apparent counterexample: the Apostles' instruction by "the Word of God" – that is, by Jesus Christ. Aquinas replies that the Apostles were instructed by Jesus "not with respect to his divinity, but inasmuch as his humanity spoke." This again follows Pseudo-Dionysius, who notes that "never once did Jesus abandon that human form which he had established and chosen, and he obediently submitted to the wishes of God the Father as arranged by the angels" (*ibid.*, ch. 4, sec. 4).

Of course, God *could* directly illuminate human beings. The point is that he does not choose to do so (see 112.2c).

- 10 Q89 is thoroughly misleading on this score. In addition to 89.1 ad 3, consider the following:

A separated soul intellectually cognizes angels through *divinely* impressed likenesses (89.2 ad 2).

A separated soul intellectually cognizes just as the angels do, through species that it receives from the influence of the *divine* light (89.3c).

... there are two modes of intellectual cognition. One is through abstraction from phantasms. ... The other mode of intellectual cognition is through the influence of species *from God* (89.4c).

A separated soul cognizes singulars by being somehow determined to them, either through the remnant of some prior cognition or affection, or else through *divine* ordination (89.8c).

Nowhere in Q89 does Aquinas indicate the crucial role played by the angels. In *QDA* QQ15–20, written only a year or so before *ST* 1a, it is clear that the illumination in question comes from separate substances. The even earlier *SCG* II.81 is likewise clear. One might suggest that Aquinas simply changed his mind on this point, but later passages in *ST* make it clear that this is not so (see the previous note).

- 11 Aquinas is fond of quoting Pseudo-Dionysius to the effect that the higher intelligible substances provide the “food” for lower ones (*SCG* II.98.1845). In commenting on this passage, at *InDDN* IV.1.279, Aquinas remarks,

Living bodily things need refreshment through which they are sustained. The angels are likewise preserved in existence through this, that their intellect and state is sated by the enjoyment of God and by the consideration of intelligible things.

Separated souls will experience a transformation in whence they take their nourishment. (Aquinas is relying here on pseudo-Pseudo-Dionysius, a corrupt reading of *On Divine Names* IV.1. The correct text has *hestia* (hearth, home) rather than *hestiasin* (food, feast).)

- 12 For another valuable discussion of the separated soul’s mode of operation, see Pegis (1974). He argues, rightly, I believe, that Aquinas’s views underwent an important change on these matters. It was not until *QDA* QQ15–20 and *ST* Q89 that Aquinas recognized the importance of making the separated soul’s cognition inferior to that of an embodied soul. Earlier treatments tend to suggest that a separated soul will be cognitively better off than the soul was in this life. See, e.g., *IV SENT* 50.1.1 ad 5. But even in *QDA* he slips, as in the above-quoted Q19 ad 19.

I take this to be a change in emphasis, rather than a fundamental change in theory. It seems to me that Aquinas does not change his basic account of how the separated souls cognize, and so I haven’t hesitated to invoke material from his earlier writings to supplement the discussion in the Treatise.

- 13 Aquinas can also appeal here to his view that a human being has just a single substantial form, comprising the rational, sensory, and nutritive aspects of the soul (§4.4). If there were a distinct sensory soul (form), it would have to be destroyed at death, making it hard to see how the remaining soul could be described as a *human* soul. Because Aquinas holds that the sensory soul is the same as the rational soul, he can hold that the sensory soul is imperishable (see 76.3 ad 1), even though the sensory capacities are not (see *QDA* 19 ad 12, *CT* I.92 [172]). It is, therefore, not the possession of sensory capacities that makes a soul sensory:

Sensible, taken as the constitutive differentia of *animal*, is taken not from the senses but from the substance of the sensory soul, which in a human being is the same in substance as the rational soul (*CT* 154.310; see §5.5).

- 14 See also *SCG* II.81.4156, *QDIA* ad 8–9, where the examples concern the impossibility of preserving the same illumination and the same state of health, and *IV SENT* 44.1.1.2 ad 4, where the example is a statue. In making these remarks, Aquinas is in agreement with van Inwagen’s (1978) argument that not even God could bring the same manuscript, once destroyed, back into existence. Aquinas would also agree with van Inwagen that “if a man

should be totally destroyed, then it is very hard to see how any man who comes into existence thereafter could be the *same* man" (p. 118). But Aquinas denies that a human being can be *totally* destroyed. Thus he remarks that, in contrast to the case of a destroyed statue, "the form of a human being, the soul, remains after the dissolution of the body. So the accounts are not similar" (IV *SENT* 44.1.1.2 ad 4). I discuss the notion of partial survival below.

- 15 The doctrine has seemed so puzzling that many of Aquinas's readers simply couldn't believe he meant it. See, e.g., the characteristically feeble exchange between William de la Mare, in his *Correctivum fratris Thomae* (art. 35), and Richard Knapwell, replying in his *Correctorium corruptorii*. De la Mare says (in effect) that Aquinas's position in 85.7 is all right as long as Aquinas doesn't really mean what he says, and Knapwell scornfully replies (in effect) that of course Aquinas doesn't mean it, and that de la Mare was a fool to suppose otherwise.

Kretzmann (1999) takes an equally dismissive stance. After quoting *SCG* II.73.1490 – "just as it is impossible for an architect to use the instruments of a flutist, so it is impossible for one human being's intellect to be another's intellect" – he remarks, "it seems to me that these considerations are most likely to have to do with Aquinas's views on the resurrection of the body, not with the introduction of an individual soul in the process of human generation" (p. 367n). Kretzmann is right, as we will see, that these views underlie Aquinas's views on the resurrection of the body. But they do so *because* of this doctrine of individual souls.

On these issues generally, see Van Dyke (2000).

- 16 Sometimes Aquinas suggests the first story: see **Luck of the Draw**, p. 117. A passage from the Romans commentary provides some evidence in favor of the second story. Here Aquinas is explaining how original sin can be transmitted from parent to child, through ordinary biological reproduction. "This seems to be impossible," he remarks, "since the sin is in the rational soul" and the rational soul is infused directly by God (§4.2). So he explains:

Although the soul is not in the semen, there is in the semen a *virtus dispositiva* belonging to the body, for the reception of the soul. When that soul is infused in the body, it is conformed to the body in its own way, just as everything received is in the recipient according to the mode of the recipient. This is why we see that children are like their parents not only as regards bodily defects (as leper generates leper and those with gout generate those with gout), but also as regards defects of the soul (as an easily angered parent generates an easily angered child, and insane children are born from insane parents) (*InRom* 5.3.408).

Both anger and insanity might be explained in physical terms, as defects of the irascible power and phantasia, and hence as defects of the brain. But Aquinas is careful not to use terms that suggest a physical explanation: rather than use the more common terms, *irascibile* or *phreneticus*, which would immediately suggest sensory defects, he uses *iracundus* and *amentes*. And given the context, he needs us to think of these as defects of the rational soul itself. Unless the body is shaping the rational soul, this is not an explanation of original sin. The implication of this passage is that the soul naturally molds itself to the body it informs, with the result that some souls are superior to others.

One might question whether Aquinas actually endorses this passage. He introduces it by saying "it is reasonably replied . . .", as if the reply is not really his. Moreover, in 1a2ae 81.1c he recites this account as something held by *alii*, and then goes on to call it "insufficient." And in *QDM* 4.1, composed around the same time as the 1a2ae, Aquinas addresses the same problems without even offering this line of argument.

But *InRom* seems to have been composed at least concurrently with the other two works, and probably later (see Torrell 1996, p. 340). Also, Aquinas calls the reply insufficient only because it cannot handle the issue of culpability. And culpability is what Aquinas immediately turns to in the next passage from *InRom*, remarking that "there still remains a puzzle" (409). Finally, and most important, even if *InRom* was composed earlier than is thought, and even if Aquinas did become disillusioned with this account of original sin, there is no reason to think that he was dissatisfied with this as an account of the mecha-

nisms through which soul-body proportionality is acquired. That part of the account is never challenged.

- 17 “*Anima autem, cum sit pars corporis [?!] hominis. . .*” This way of putting things is defensible, given Aquinas’s occasional usage of *corpus* to include form and matter (see, e.g., *De ente* 2.26–84 [6–7], as discussed in §1.3). Still, this is a surprising way for Aquinas to express himself, and perhaps *corporis* does not belong in the text. (We await a critical edition of this work.) More often, he describes the soul as “part of the human species” (75.4 ad 2, 29.1 ad 5), or part of the whole compound (as in IV *SENT* 43.1.1.1 ad 2, just quoted).
- 18 See Swinburne (1997), p. 149: “Persons such as men are very different from inanimate beings such as cars. They have hopes, fears, and memories which make it very difficult to give sense to the idea of their partial survival.” See also Swinburne (1984), pp. 17–21. For a compelling defense of the notion of partial survival, see Parfit (1971) and (1984), pp. 245–306. Following Parfit, I speak of ‘identity’ only in cases of complete survival.

I am indebted in this section to the work of Eleonore Stump, forthcoming in a monograph published by Routledge, which stresses the extent to which Aquinas treats the separated soul as the same person. Her own conclusions are very different, however.

- 19 Thus the Vulgate, which Aquinas quotes at *In symbolum* 11.1004. Cf. the Revised Standard Version: *For I know that my Redeemer lives, and at last he will stand upon the earth; and after my skin has been thus destroyed, then from my flesh I shall see God.* The editors list *without* as a variant for *from*.
- 20 In *QQ* 11.6c (an early quodlibet, from 1259), Aquinas does make a more straightforward argument. Numerical sameness over time, he argues, requires “identity of essential principles,” and the body is an essential principle. But he doesn’t explain why having a particular body is an essential principle. These two texts (from *QQ* and *CT*) are the only ones I have found where Aquinas can be said to give an argument for the resurrected body’s numerical sameness.

There is, incidentally, a question here of what makes the reassembled matter be the *same* matter. If matter individuates the form (at the start), and form individuates the substance (over time), what individuates the matter (over time, even apart from the soul)? Aquinas sometimes appeals to the enduring “dimensions” of particular matter. See, e.g., IV *SENT* 44.1.1.1 ad 3, *QQ* 11.6 ad 2, *CT* I.154 [308]. I will not try to make sense of this dark doctrine.

- 21 A clear example is 119.1, where Aquinas discusses what to say about food’s being newly incorporated into a living body. Aquinas finally holds that “the food is truly converted into the true human nature inasmuch as it truly takes on the species of flesh and bone and such parts” (c). This seems to be nothing more than an appeal to form.

Given that Aquinas so clearly and so regularly describes matter as the principle of individuation for form, it would be astonishing if I were the first to notice as much. Indeed, I am not. Owens (1994) notices the point, but does not stress it (p. 185). Cross (1999b) seems dimly aware of the situation: “his [Aquinas’s] discussion of the human soul makes it clear that there is an important priority that he would want to give to *form* in individuation” (p. 13). No doubt there are others. But the vast literature on individuation seems almost entirely oblivious. Roland-Gosselin begins his classic study with the remark that “*Saint Thomas ne paraît jamais avoir éprouvé la moindre hésitation à accepter le théorie d’Aristote sur le principe de l’individualité des substances matérielles. Que la matière soit ce principe, il l’admet dès ses premiers ouvrages comme un axiome reçu*” (1926, p. 104; my emphasis). Even though Roland-Gosselin goes on to quote a passage where Aquinas explicitly indicates that matter individuates form (*InDT* 4.2c), and still later he recognizes that “*l’âme acquiert l’individualité, a raison du corps dont elle est la forme*” (p. 118), he throughout describes matter as the principle of individuation for the material substance, which at best is misleading and at worst makes Aquinas’s views incoherent. Wippel (2000), pp. 351–75, seems equally unaware of the issue.

- 22 To say that the argument from *CT* I.153.305 is not demonstrative may seem too charitable. The argument is flat-out invalid (as were my paraphrases of it) because of an equivocation on the word ‘same.’ Aquinas’s metaphysics entail that the soul can be united only with *qualitatively* the same body. This does not show that it would have to be united with *numerically* the same body. But charity seems warranted here because Aquinas explicitly concedes that there are no demonstrative arguments in this area. Moreover, the argument might be read as dialectical rather than demonstrative (as making a plausible but not necessary case for its conclusion). For say we get the conclusion that the resurrection requires qualitatively the same body. We might then go on to speculate about how God would be most likely to bring this about. Say the choices are (1) assemble atoms that already exist into the body they once formed; (2) make up an entirely new body from entirely new atoms. Doesn’t (1) seem both more parsimonious and more elegant? Isn’t it likely that God would recycle?

Epilogue

- 1 Norman Kretzmann has argued over a number of years that Aquinas is torn on the question of whether God might not have created anything at all. To preserve God’s freedom, Aquinas wants this to be a possibility, and he clearly says as much on many occasions. But Aquinas also accepts Pseudo-Dionysius’s principle that goodness is by its very nature self-diffusive (e.g., 19.2c). So Kretzmann argues that – on Aquinas’s own principles – God’s goodness does necessitate some act of creation (see, e.g., 1999, pp. 130–36).

It seems to me that reflection on the infinity of God’s goodness shows why, for Aquinas, creation is optional. In a situation where it is not possible to increase the quantity or quality of goodness in the world, the principle of self-diffusion can apply only in a limited way. Someone who finds herself in such a circumstance might try to honor the spirit of the principle by celebrating and heralding the goodness that already exists. This would be a reasonable, appropriate way to act (which is how Aquinas describes God’s choice to create; e.g., *SCG* I.82.699–700). But she might just as well sit quietly and enjoy the moment. Thus Aquinas remarks of God’s infinite goodness that “it would take away nothing from his goodness if it were not shared” (*QDP* 3.15 ad 12). If this sounds odd, it is because we are thinking of cases where goodness, by being shared, can be expanded. But the infinity of God’s goodness throws off all such calculations.

- 2 I know of these lines only anecdotally. The Baltimore Catechism that was widely taught in the United States in the mid-twentieth century speaks of our being created “to know, love, and serve Him in this life and to be happy with Him in the next.” But the third edition of the Baltimore Catechism comes close to the lines I report: “God made us to show forth His goodness and to share with us His everlasting happiness in heaven.” And the more recent *Catechism of the Catholic Church* (pt. I, n. 293) holds that “Scripture and Tradition never cease to teach and celebrate this fundamental truth: ‘The world was made for the glory of God.’”
- 3 For a clear statement of this view, see Kant’s *Conjectural Beginning of Human History*:

Thus man had entered into a relation of equality with all rational beings, whatever their rank (*Gen.* 3,22), with respect to the claim of being an end in himself, respected as such by everyone, a being which no one might treat as a mere means to ulterior ends. So far as natural gifts are concerned, other beings may surpass man beyond all comparison. Nevertheless, man is without qualification equal even to higher beings in that none has the right to use him according to pleasure. This is because of his reason . . . (*Ak* 8: 115).

Something approaching this can be found in Leibniz, who remarks, “Nor should the fact that minds get such deference in the universe appear astonishing, since they are produced in the exact image of the Supreme Creator, and relate to him not only as machines to their builder (as other things do), but also as citizens to their prince” (“On the Ultimate Origination of Things,” in Leibniz 1989, p. 154). For earlier and generally weaker Renaissance versions of humanism, see Kristeller (1972), pp. 1–21.

Though I am contrasting such humanism with the medieval world view, there are of course exceptions to the generalization. Meister Eckhart, in the early fourteenth century, made a claim for human dignity much like that of Kant's, provocatively remarking, "When God made man, he made woman from man's side, so that she might be equal to him. . . . So should the just soul be equal with God and close beside God, equal beside him, not beneath or above" (German Sermon 6, p. 187).

- 4 The literature on these issues in Aquinas tends to neglect the significance of God's perfect goodness, and to exaggerate the significance of human beings. Blanchette (1992) writes that "it is still human being who remains at the center of his [Aquinas's] theory of the universe. The lowest of intellectual creatures, human being is still the hinge on which the whole universe turns because it is the horizon and confine where the material and immaterial come together" (p. 280). This is highly misleading. We are at the center only in that we are most representative of all creatures, being a union of mind and body. That does give us certain special needs, and hence earns us a certain amount of attention, but it does not make us the most important. In that respect we are certainly not at the center of the universe.

Southern (1970) likewise gives a misleading impression of Aquinas, remarking that "it is probably true that man has never appeared so important a being in so well-ordered and intelligible a universe as in his works" (p. 50). For the humanist in Southern's sense, "man is the noblest of God's creatures" (p. 31), while "nature is seen as an orderly system, and man – in understanding the laws of nature – understands himself as the main part, the key-stone, of nature" (p. 32). If this is what humanism requires, then Southern seems entirely wrong when he remarks, "I believe the period from about 1100 to about 1320 to have been one of the great ages of humanism in the history of Europe: perhaps the greatest of all" (p. 31). Certainly, this claim cannot be defended if one also accepts Southern's claim that "the two *Summae* of Thomas Aquinas mark the highest point of medieval humanism" (p. 49). Southern (1995) contains a revised and less objectionable version of this material.

- 5 Lovejoy (1960) rightly sees some tension in Aquinas between this principle of plenitude and Aquinas's insistence on God's absolute freedom. The more weight Aquinas puts on this principle, as a guide to the nature of creation, the less room he has to defend God's freedom in creation. But Lovejoy's reading of Aquinas is absolutely appalling: the blatant contradictions he claims to find (pp. 73–79) are the product of misunderstandings and mistranslations. On p. 79, for instance, quoting 25.6 ad 3 – *universum, suppositis istis rebus, non potest esse melius* – Lovejoy offers the translation "these things being supposed, the universe cannot be better than it is," and on that basis he charges Aquinas with stating the "formal negation" of this claim only two sentences later. But a correct translation is as follows: "the universe, with reference to what in fact exists in it, cannot be better." So understood, there is obviously no contradiction when Aquinas goes on to say that "God could make other things, or add other things to the things he has in fact made, and then that universe would be better."

More generally, it is hard to see how Lovejoy's principle of plenitude could be taken to exhaust the possibilities of creation. At a minimum, there will always be an infinite gap between the highest of finite beings and God, and hence God could always make one more species of angel, better than every other (IV *SENT* 44.1.2c). It is also not clear that the principle of plenitude rules out the creation of new species in between existing species. Lovejoy speaks of a stronger version of the principle of plenitude, a principle of continuity according to which adjoining species have a common boundary, with no intervening room for a new species (pp. 55–58, 79–80). Lovejoy finds Nicholas of Cusa advancing this stronger claim (*On Learned Ignorance* III.1, as quoted on p. 80). But how is this to be understood? What would it be for two species of angels to be continuous? In what sense is there continuity between the species *human being* and *chimpanzee*? In any case, I doubt that Aquinas embraced this principle of continuity, even when limited to finite beings. But I know of no decisive textual evidence, since his talk of God's adding new species (as in 25.6 ad 3) might refer only to higher species of angels.

- 6 This last sentence is awkward in Latin as well as English, because the point is an awkward one to make. What is directly intended, Aquinas says, is human being: *natura intendit generare hominem*. It's not that nature intends to create the species *homo (sapiens)*, because strictly speaking the species is a mental concept (see §10.1). Nature also does not intend to create particular human beings: *non hunc hominem*. But since Aquinas rejects Platonism, he believes that particulars are the only things that can be created: there is no other way to make the concept of human being a reality.

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Appendix: Outline of the Treatise (*ST* Ia 75–89)

I. The soul's essence

A. The soul in its own right

- | | | |
|-------|-------------------------------------------------------|-------------------|
| 75.1. | Is the soul a body? | §§1.1–1.5 |
| 75.2. | Is the human soul something subsistent? | §§2.2, 5.4, 9.4 |
| 75.3. | Are the souls of brute animals subsistent? | §2.3 |
| 75.4. | Is the soul the human being? | §§In.3, 2.1, 12.4 |
| 75.5. | Is the soul composed of matter and form? | |
| 75.6. | Is the human soul imperishable? | §§12.1 and 12.2 |
| 75.7. | Does the soul belong to the same species as an angel? | |

B. The soul's union with body

- | | | |
|-------|--------------------------------------------------------------------------------|------------------------------------------|
| 76.1. | Is the intellective principle united to the body as its form? | §3.1, <i>Excursus</i> ,
§§5.3 and 5.4 |
| 76.2. | Is the intellective principle numerically multiplied as bodies are multiplied? | §12.4 |
| 76.3. | Does a body whose form is the intellective principle have any other soul? | §4.4 |
| 76.4. | Is there any other substantial form in such a body? | §§3.2 and 4.4 |
| 76.5. | What sort of body should have the intellective principle as its form? | §4.2 |
| 76.6. | Is the soul united to its body through the mediation of any accident? | |
| 76.7. | Is the soul united to such a body through the mediation of any other body? | |
| 76.8. | Is the soul whole in each part of the body? | §3.2 |

II. The soul's capacities

A. In general

- | | | |
|-------|---------------------------------------------------------|---------------|
| 77.1. | Is the soul's essence its capacity? | §§5.2–5.5 |
| 77.2. | Does the soul have only one capacity, or more than one? | |
| 77.3. | How are the soul's capacities distinguished? | §§5.1 and 6.2 |
| 77.4. | On the order of these capacities to one another. | |
| 77.5. | Is the soul the subject of all its capacities? | §5.4 |
| 77.6. | Do the soul's capacities flow from its essence? | §§5.2 and 5.4 |

- 77.7. Does one capacity originate in another?
 77.8. Do all the soul's capacities remain in it after death? §12.3

B. Specifically

1. Those capacities that come before intellect

- 78.1. The kinds of capacities belonging to the soul §§7.1 and 7.2
 78.2. The species of the vegetative part
 78.3. The external senses §§6.2–6.4
 78.4. The internal senses §§6.2, 6.4, 8.4, 9.1–9.3

2. The intellective capacities

- 79.1. Is the intellect a capacity of the soul or its essence? §5.2
 79.2. Is it a passive capacity? §11.1
 79.3. Should we posit an agent intellect? §§5.1 and 10.3
 79.4. Is the agent intellect part of the soul? §10.3
 79.5. Is there one agent intellect for everyone?
 79.6. Is memory in intellect?
 79.7. Is memory a different capacity than intellect? §5.1
 79.8. Is reason a different capacity than intellect?
 79.9. Are higher and lower reason distinct capacities?
 79.10. Is intelligence a capacity different from intellect?
 79.11. Are speculative and practical intellect distinct capacities?
 79.12. Is synderesis a capacity of the intellective part? §8.3
 79.13. Is conscience a capacity of the intellective part?

3. The appetitive capacities

a. The appetitive in general

- 80.1. Should appetite be treated as a special capacity of the soul? §§7.1, 7.2, 8.1
 80.2. Should appetite be divided into sensory and intellective appetite, as distinct capacities? §§8.1 and 8.2

b. Sensuality

- 81.1. Is sensuality solely an appetitive power?
 81.2. Is sensuality divided into the irascible and the concupiscible, as distinct capacities? §§7.1 and 8.2
 81.3. Do the irascible and concupiscible obey reason? §§8.4 and 8.5

c. Will

- 82.1. Does the will have appetites for anything of necessity? §§7.3 and 7.4
 82.2. Does it have appetites for all things of necessity? §7.3
 82.3. Is it a loftier capacity than intellect? §7.4

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- 82.4. Does it move the intellect? §§7.4 and 8.3
 82.5. Is it distinguished into the irascible and the concupiscible? §§8.2 and 8.3

d. Free decision

- 83.1. Do human beings have free decision? §§7.3 and 7.4
 83.2. What is free decision – a capacity, an act, or a disposition? §7.3
 83.3. Is it an appetitive or a cognitive capacity? §7.3
 83.4. Is it the same capacity as the will or a different capacity? §7.3

III. The soul's operation

A. How the intellect operates when connected to its body

i. How it cognizes the bodily things that are below it

a. What it cognizes these things through

- 84.1. Does the soul cognize bodies through intellect? §10.1
 84.2. Does it cognize them through its essence or through species? §11.1
 84.3. Are the species of all intelligible things naturally innate in it? §10.2
 84.4. Do they emanate from certain separate immaterial forms? §10.2
 84.5. Does our soul see all the things that it intellectually cognizes in their eternal natures? §10.2
 84.6. Does it acquire intelligible cognition from sensation? §§9.3, 9.4, 10.2, 10.3
 84.7. Can the intellect, through the intelligible species that it has within itself, actually cognize without turning itself toward phantasms? §§9.3 and 9.4
 84.8. Is the intellect's judgment impeded by an impediment to the sensory powers? §9.4

b. How and in what order the intellect cognizes

- 85.1. Does our intellect cognize by abstracting species from phantasms? §§9.3 and 10.3
 85.2. Are the intelligible species abstracted from phantasms related to our intellect as that which is cognized or as that by which something is cognized? §9.3
 85.3. Does our intellect naturally cognize the more universal first? §10.4
 85.4. Can it cognize more than one thing at once?
 85.5. Does it cognize through composition and division? §§8.4, 9.2, 10.4

- 85.6. Can it err? §§5.5 and 10.5
 85.7. Can one person intellectually cognize the same thing better than another? §12.4
 85.8. Does our intellect cognize the indivisible prior to the divisible?

c. What the intellect cognizes in bodily things

- 86.1. Does it cognize singulars? §§8.4, 9.4, 10.3
 86.2. Does it cognize the infinite?
 86.3. Does it cognize contingent things?
 86.4. Does it cognize future things?

2. How the intellect cognizes itself and things within it

- 87.1. Does it cognize itself through its essence? §§11.1 and 11.4
 87.2. How does it cognize the dispositions existing within it? §11.2
 87.3. How does the intellect cognize its own act? §11.2
 87.4. How does it cognize the act of will?

3. How the intellect cognizes immaterial substances above it

- 88.1. Can the human soul, in its state of life at present, intellectually cognize angels through themselves? §11.4
 88.2. Can it reach knowledge of them through the cognition of material things? §11.4
 88.3. Is God the thing we cognize first? §11.4

B. How the intellect operates when separated from its body

- 89.1. Can a soul separated from the body engage in intellectual cognition? §§9.4, 12.2, and 12.3
 89.2. Does it intellectually cognize separate substances? §12.2
 89.3. Does it intellectually cognize all natural objects? §§12.2 and 12.3
 89.4. Does it cognize singulars?
 89.5. Does the dispositional knowledge acquired here remain in a separated soul? §§12.3 and 12.4
 89.6. Can it use the dispositional knowledge acquired here?
 89.7. Does spatial distance impede a separated soul's cognition? §12.2
 89.8. Do souls separated from the body cognize the things that go on here? §12.2

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